State of California

THE RESOURCES AGENCY

Department of Water Resources

BULLETIN No. 130-64

HYDROLOGIC DATA: 1964

Volume V: SOUTHERN CALIFORNIA

Appendix D: SURFACE WATER QUALITY

APRIL 1966

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
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ORGANIZATION OF BULLETIN NO. 130 SERIES

Volume I - NORTH COASTAL AREA

Volume II - NORTHEASTERN CALIFORNIA

Volume III - CENTRAL COASTAL AREA

Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

Appendix A - CLIMATE

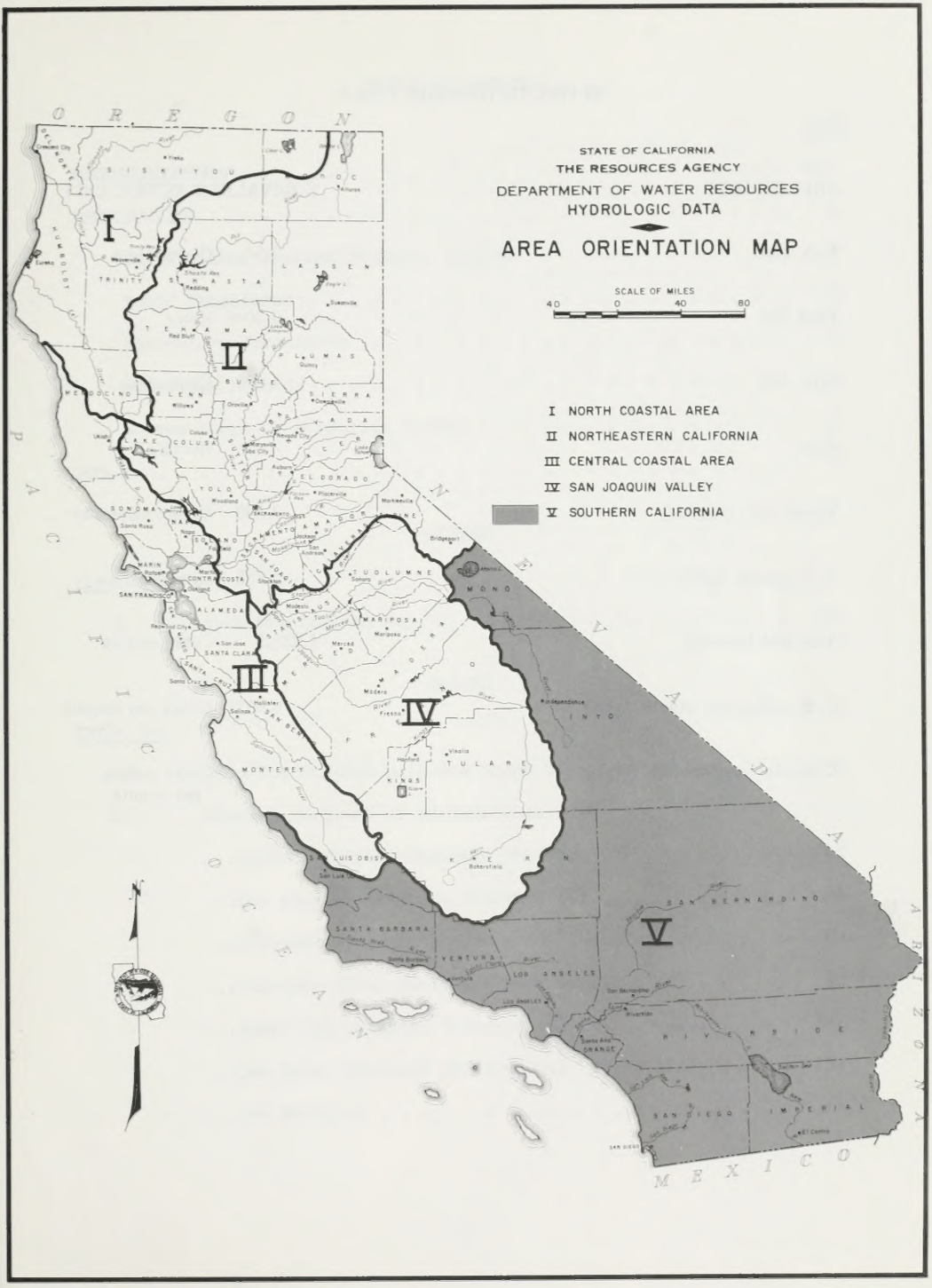
Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY

FIGURE 1


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
HYDROLOGIC DATA
AREA ORIENTATION MAP
SCALE OF MILES
40 0 40 80
I NORTH COASTAL AREA
II NORTHEASTERN CALIFORNIA
III CENTRAL COASTAL AREA
IV SAN JOAQUIN VALLEY
V SOUTHERN CALIFORNIA
OREGON
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
SISKIYOU
TRINITY
SHASTA
LASSEN
MODOC
HUMBOLDT
MENDOCINO
TEHAMA
PLUMAS
BUTTE
SIERRA
GLENN
COLUSA
LAKE
YOLO
SONOMA
NAPA
SACRAMENTO
AMADOR
EL DORADO
ALPINE
MARIN
CONTRA COSTA
SAN FRANCISCO
ALAMEDA
TUOLUMNE
MONO
SAN JOAQUIN
STANISLAUS
MERCED
MARIPOSA
SANTA CLARA
SAN BENITO
MONTEREY
MADERA
FRESNO
INYO
KINGS
TULARE
KERN
SAN LUIS OBISPO
SANTA BARBARA
VENTURA
LOS ANGELES
SAN BERNARDINO
ORANGE
RIVERSIDE
SAN DIEGO
IMPERIAL

METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT	
Inch (in)	2.54	Centimeters
Foot (ft)	0.3048	Meter
Mile (mi)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal)	3.785	Liters
Acre foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liters per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute

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ACKNOWLEDGMENTS

The extensive coverage of the surface water quality monitoring program in Southern California has been made possible through the cooperation of federal, state, and local agencies. The Department wishes to express its appreciation for the valuable assistance and cooperation received from the agencies listed below.

Laboratory analytical results for certain surface water stations were supplied to the Department by The Metropolitan Water District of Southern California, City of Los Angeles Department of Water and Power, City of Los Angeles Health Department, Los Angeles County Health Department, City of Long Beach Health Department, and Fruit Growers Laboratory of Santa Paula, California.

Imperial County Health Department rendered valuable aid in making bacteriological analyses for surface water samples collected in that county.

INTRODUCTION

Appendix D to Volume V of Bulletin No. 130-64 contains data on quality of surface water in Southern California for the 1963-64 water year. The data presented are measured values of the chemical, physical, bacteriological, and radiological characteristics of surface water in Southern California. The Southern California area is shown on Figure 1.

Surveillance Program Changes, 1963-64

During the water year reported, 52 stations were included in the surface water quality surveillance program in Southern California. These stations are listed in Table D-1. Since the last reporting date, two stations were removed and three new ones added.

Warm Creek at San Bernardino (Station 50C), a Santa Ana River tributary, was removed from the program because it had been dry since February 1962. However, two other stations in the upper Santa Ana River Basin were added to the program -- Santa Ana River at Colton (Station 51f) and San Timoteo Creek near Loma Linda (Station 51g). The surface flow measuring stations at these points were established as a part of a cooperative program conducted by the Department and the United States Geological Survey (USGS).

Except for occasional storm runoff at Station 51f, flow consists primarily of waste water effluent from two sewage treatment plants, both of the City of San Bernardino. Station 51g is located at a USGS gaging station on San Timoteo Creek, tributary to Santa Ana River. The flow at this station is waste water effluent from the City of Loma Linda sewage treatment plant.

Forester Creek at Mission Gorge Road (Station 65a) was removed from the program in July 1963, and San Diego River at Mission Gorge Road (Station 65c) was added as a replacement. At one time, Station 65a monitored waste water flow consisting mainly of effluent from the City of El Cajon sewage treatment plant. A pipeline was constructed, however, which discharged this effluent to a location further downstream, bypassing the station. Station 65c was selected to monitor the stream below this new point of discharge. (The pipeline has since been connected to the San Diego Metropolitan Sewerage System.)

Agencies that participated in the field sampling program during the 1963-64 water year, together with the number of surface stations sampled by each, are:

Agency	Number of Stations Sampled
Department of Water Resources	46
The Metropolitan Water District of Southern California	2
City of Los Angeles Department of Water and Power	1
City of Los Angeles Health Department*	1
City of Long Beach Health Department	1
City of San Bernardino	1

Field Procedures

Because of the possible effect that time and method of sampling may have on the analyses obtained, an explanation of the procedures established for surface water sample collection is given.

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*City of Los Angeles Health Department was abolished in July 1, 1964; its function then being assumed by the Los Angeles County Health Department.

For complete mineral and bacteriological analyses, water samples are collected monthly in the northern portion of the Southern California areas, bimonthly in most of the southern portion, and twice a year at the Colorado River stations. In addition, in May and September, samples are collected at most stations for radiological analyses and at selected stations for trace elements analyses. Samples collected for bacteriological examination are transported on ice to the laboratories as quickly as possible.

At the time surface samples are collected for laboratory examination, field determinations are made for dissolved oxygen by the modified Winkler method, water temperature, and field pH. A visual inspection is made of the stream or lake and the physical conditions are noted. Flow data are either obtained from gage readings or estimated by the sampler.

Laboratory Procedures

Methods of mineral, bacterial, and radiological analyses used by the Department of Water Resources are generally those described in the American Public Health Association, American Water Works Association, and Water Pollution Control Federation publication, "Standard Methods for the Examination of Water and Waste Water", 11th edition, 1960. In some cases, the methods described in the following publications also have been used:

U. S. Geological Survey, "Methods for Collection and Analysis of Water Samples", Water Supply Paper 1454, 1960.

United States Public Health Service, Taft Sanitary Engineering Center, "Taft Method Analytical Procedure, Alkyl Benzene Sulfonate Determination".

Reporting Methods

Individual chemical constituents of analyses in Table D-2 (surface water) are reported as parts per million (ppm). Bacteriological analyses, reported as most probable number per milliliter (MPN/ml), are shown in Table D-2.

In addition to the chemical constituents reported in Table D-2, oil and grease, phenols, alkalinity, 5-day biochemical oxygen demand (BOD), dissolved oxygen (DO), and free carbon dioxide (CO_2) are reported in parts per million (ppm), as are values for alkyl benzene sulfonate (ABS), which was the major constituent in household synthetic detergents (syndets) during the reporting period.

Radiological analyses for surface water are reported in pico-curies per liter (pc/l). These analyses were performed by the State Department of Public Health, Sanitation and Radiation Laboratory, Berkeley, California. All surface water samples were given analyses for solid alpha-solid beta and dissolved alpha-dissolved beta activity.

Trace elements (heavy metals) analyses for surface water are reported as parts per billion in Table D-4. These analyses were performed by the United States Geological Survey Laboratory in Sacramento, California, by a newly developed spectrographic procedure perfected by that laboratory. Limitations in the precision of measurements by spectrographic analyses frequently require the reporting of results as less than or more than the amounts presented, as indicated in the footnotes accompanying the table.

It should be pointed out that the determinations of some of the reported constituents are not absolute, but merely indicative of changes in water quality. The purpose of these data is to help the investigator

judge whether further, more intensive investigation is warranted to identify a source of pollution or to trace the movement of pollution or water quality degradation.

Stream Sampling Numbering System

Stream sampling stations are indexed according to location, with the name of the stream and a brief description of the sampling point. For ready reference, however, numbers are assigned to these stations. Sometimes an alphabetical character is used with the number. An example of a station number is Station No. 65c, San Diego River at Mission Gorge Road.

The locations of stations sampled for the surface water quality program are indexed in Table D-1 and are shown on Plate 1.

DATA

SURFACE WATER QUALITY

TABLE D-1

SAMPLING STATION DATA AND INDEX

SURFACE WATER STATION LOCATIONS
YEARS 1963-1964

Station	Station Number	Location[a]	Beginning of Record	Frequency[b] of Sampling	Sampled[c] by	Analysis on page
Alamo River						
At International Boundary	59	17S/16E-18	February 1951	B	DWR	112, 171
Near Calipatria	60	11S/13E-22	March 1951	B	DWR	114, 172
All American Canal						
Near Pilot Knob	56a	16S/21E-24	May 1953	S	DWR	98, 171
Chino Creek						
Near Chino	86	2S/ 8W-36	April 1952	M	DWR	146, 174
Colorado River						
Near Topock, Arizona	54	7N/24E- 8	April 1951	S	DWR	92, 171
Lake Havasu, Colorado River Aqueduct at Intake	56d	3N/27E-28	November 1953	M	MWD	104, 173
Aqueduct at La Verne	69	1S/ 9W- 6	April 1951	M composite	MWD	76, 168
Below Parker Dam	55	2N/27E-16	April 1951	S	DWR	94, 171
Near Blythe	56c	7S/23E- 2	May 1953	S	DWR	102, 171
At Yuma, Arizona	56	16S/23E-36	April 1951	S	DWR	96, 171, 176
Below Morelos Dam	56b	8S/24W-28[d]	May 1953	S	DWR	100, 171
Cuyama River						
Near Garey	44a	10N/33W-25	October 1958	M	DWR	164, 165
Escondido Creek						
Near Harmony Grove	63	12S/2W-30	March 1951	B	DWR	154, 175, 177
Lake Elsinore						
At State Park	89	6S/ 5W- 1	February 1952	B	DWR	150, 174
Los Angeles Aqueduct						
Near San Fernando	70	3N/15W-30	April 1951	M	LADWP	80, 169
Los Angeles River						
At Figueroa Street	47	1S/13W-15	April 1951	M, S	LACHD-DWR	46, 166, 176
At Pacific Coast Highway	48	4S/13W-26	April 1951	M, S	LBDPH, DWR	50, 166, 176
Matilija Creek						
Above Dam	45b	5N/23W-19	May 1953	M	DWR	20, 166
Mission Creek						
At Whittier Narrows	49a	2S/11W- 6	April 1951	M	DWR	58, 166
Mojave River						
At The Forks	67a	3N/ 3W-18	July 1957	M	DWR	88, 170
Near Victorville	67	6N/ 4W-29	March 1951	M	DWR	84, 170
New River						
At International Boundary	57	17S/14E-14	April 1951	B	DWR	108, 171
Near Westmorland	58	12S/13E-30	February 1951	B	DWR	110, 171
Piru Creek						
Near Piru	46c	4N/18W-20	June 1957	M	DWR	32, 166
Rio Hondo						
At Whittier Narrows	49	2S/11W- 6	April 1951	M	DWR	54, 166, 176
Above Spreading Grounds	49b	2S/12W-12	May 1963	M	DWR	60, 167, 176

TABLE D-1

SAMPLING STATION DATA AND INDEX

SURFACE WATER STATION LOCATIONS
YEARS 1963-1964

Station	Station Number	Location [a]	Beginning of Record	Frequency [b] of Sampling	Sampled [c] by	Analysis on page
Salton Sea						
At Salton Sea State Park	68a	7S/10E- 2	March 1955	B	DWR	118, 172
San Diego River						
At Old Mission Dam	65	15S/ 2W-25	April 1951	B	DWR	156, 175
Near Mission Gorge Road	65c	15S/ 2W-35	July 1962	B	DWR	160, 175, 177
San Dieguito River						
Below San Pasqual Valley	64	13S/ 2W- 1	April 1951	B	DWR	164, 175
San Gabriel River						
At Azusa Powerhouse	50d	1N/10W-22	March 1957	M	DWR	68, 167
At Whittier Narrows	50	2S/11W- 5	April 1951	M	DWR	64, 167, 176
San Luis Rey River						
Near Pala	62	9S/ 2W-36	March 1951	B	DWR	164, 175
Santa Ana River						
Near Mentone	51b	1S/ 2W- 4	April 1951	M	DWR	134, 174
At Colton	51f	1S/ 4W-28	March 1964	M	DWR	142, 174
Near Arlington	51	2S/ 6W-25	January 1951	M	DWR	126, 174, 177
Near Norco	51e	2S/ 7W-36	April 1951	M	DWR	138, 174, 177
Below Prado Dam	51a	3S/ 7W-29	April 1951	M	DWR	130, 174, 177
Santa Clara River						
At Los Angeles-Ventura County Line	46	4N/17W-30	April 1951	M	DWR	24, 166, 176
Near Santa Paula	46a	3N/21W-12	April 1951	M	DWR	28, 166, 176
Santa Margarita River						
Near Fallbrook	51c	9S/ 4W-12	February 1951	B	DWR	152, 175
Santa Paula Creek						
Near Santa Paula	46e	4N/21W-27	June 1957	M	DWR	40, 166
Santa Ynez River						
At Cachuma Reservoir	44b	6N/30W-19	April 1958	M	DWR	12, 165, 176
Near Solvang	45a	6N/31W-22	April 1951	M	DWR	16, 165, 176
San Timoteo Creek						
Near Loma Linda	51g	1S/ 4W-22	March 1964	M	DWR	144, 174
Sespe Creek						
Near Fillmore	46d	4N/20W-12	June 1957	M	DWR	36, 166
Spring Valley Creek						
Near La Pressa	65b	17S/ 1W-17	March 1958	B	DWR	158, 175
Tia Juana River						
At International Boundary	66	19S/ 2W- 1	April 1951	B	DWR	162, 175
Ventura River						
Near Ventura	61	3N/23W- 8	May 1951	M	DWR	72, 167, 176
Warm Creek						
At Colton	50b	1S/ 4W-21	April 1951	M	City of San Bdno.	122, 174, 177

TABLE D-1

SAMPLING STATION DATA AND INDEX

SURFACE WATER STATION LOCATIONS

YEARS 1963-1964

Station	Station Number	Location [a]	Beginning of Record	Frequency [b] of Sampling	Sampled [c] by	Analysis on page
Whitewater River						
Near Whitewater	68	3S/ 3E- 2	February 1951	B	DWR	116, 178
Near Mecca	68b	7S/ 9E-31	July 1957	B	DWR	120, 178

a. Except as indicated below, location is referenced to San Bernardino Base and Meridian.
b. M - Monthly, B - Bimonthly, Q - Quarterly, S - Semiannually.
c. DWR, Department of Water Resources; MWD, Metropolitan Water District; LACHD, Los Angeles County Health Department; LBDPH, Long Beach Department of Public Health; LADWP, Los Angeles Department of Water and Power.
d. Gila and Salt River Base and Meridian.

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA YNEZ RIVER				44B			
AT CACHUMA RESERVOIR											
10-2-63 0700 Clear; yellowish green color	738.57 11.43*	8.3	<0.45 <0.45				<25		9.4	110	DWR
11-14-63 1410 Clear	737.82 12.18*	7.8	6.2 2.3				<25		8.0	84	DWR
12-3-63 0830 Clear	737.79 12.21*	7.6	0.6 0.6				<25		8.4	82	DWR
1-3-64 1000 Clear; large fish and ducks	737.41 12.59*	7.6	<0.45 <0.45				<25		7.8	74	DWR
2-4-64 1505 Clear; large golden carp	737.01 12.99*	8.0	<0.45 0.6				<25		11.0	102	DWR
3-3-64 1115 Clear; large golden carp	736.42 13.58*	7.7	<0.45 0.6				<25		9.8	90	DWR
4-2-64 1110 Clear	736.00 14.00*	7.8	21 23				<25		10.4	92	DWR
5-4-64 1550 Clear	734.95 15.05*	8.0	0.6 <0.45				<25		8.8	85	DWR

*Water surface below spillway in feet.
Note: See page 162 for footnotes.

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

*Water surface below artesian in test.
Note: See page 162 for footnotes.

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C	TDS Computed	Total hardness as $CaCO_3$
Stream name and station number AT CACHUMA RESERVOIR						SANTA YNEZ RIVER						44B							
10- 2-63	76	8.3	764	--	--	41 1.78	--	14 0.47	156 2.56	--	16 0.45	--	--	0.35	--				328
11-14-63	65	8.0	772	70 3.49 40	40 3.29 38	42 1.83 21	4 0.10 1	0	205 3.36 39	233 4.85 56	16 0.45 5	1.0 0.02	0.5	0.42	7	515	515		339
12- 3-63	58	7.9	785	70 3.49 40	39 3.21 37	43 1.87 22	4 0.10 1	0	212 3.47 40	228 4.75 54	17 0.48 6	1.5 0.02	0.5	0.40	8	520	516		335
1- 3-64	56	8.1	776	69 3.44 39	41 3.37 38	44 1.91 22	4 0.10 1	0	220 3.61 41	229 4.77 54	17 0.48 5	1.0 0.02	0.6	0.38	8	525	522		341
2- 4-64	54	8.3	754	66 3.29 37	41 3.37 38	47 2.04 23	4 0.10 1	12 0.40 5	190 3.11 35	228 4.75 54	18 0.51 6	1.5 0.02	0.6	0.36	9	560	521		333
3- 3-64	53	8.0	765	76 3.79 42	40 3.29 37	41 1.78 20	4 0.10 1	0	220 3.61 41	230 4.79 54	16 0.45 5	0.5 0.01	0.5	0.36	8	550	524		354
4- 2-64	54	8.1	756	77 3.84 43	40 3.29 37	41 1.78 20	4 0.10 1	0	220 3.61 41	230 4.79 54	17 0.48 5	1.0 0.02	0.6	0.38	11	540	530		357
5- 4-64	58	7.9	763	71 3.54 40	42 3.45 39	40 1.74 20	4 0.10 1	0	207 3.39 40	228 4.75 55	15 0.42 5	0.6 0.01	0.5	0.40	9	535	512		350

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Synders	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number SANTA YNEZ RIVER 44B											
AT CACHUMA RESERVOIR											
6-2-64 1020 Clear	733.65 16.35*	8.0	0.6 23				<25		8.6	90	DWR
7-1-64 1715 Clear; large fish	732.25 17.75*	7.8	2.3 2.3				<25		9.4	107	DWR
8-4-64 1100 Clear	730.14 19.86*	8.0	<0.45 <0.45						9.6	90	DWR
9-1-64 1115 Clear	728.38 21.62*	8.0	2.3 0.6				<25		10.0	115	DWR

*Water surface below spillway in feet.

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT CACHUMA RESERVOIR						SANTA YNEZ RIVER					44B							
6- 2-64	65	8.0	772	73 3.64 40	43 3.54 39	40 1.74 19	4 0.10 1	0	215 3.52 40	232 4.83 55	16 0.45 5	1.0 0.02	0.5	0.41	6	572	522	359
7- 1-64	72	8.3	774	71 3.54 39	43 3.54 39	42 1.83 20	4 0.10 1	12 0.40 4	190 3.11 35	237 4.93 55	17 0.48 5	2.0 0.03	0.5	0.36	10	570	532	354
8- 4-64	74	8.5	779	72 3.59 39	43 3.54 39	43 1.87 21	4 0.10 1	12 0.40 4	188 3.08 34	242 5.04 56	17 0.48 5	2 0.03	0.5	0.38	8	632	536	357
9- 1-64	73	8.4	789	74 3.69 41	42 3.45 38	42 1.83 20	4 0.10 1	12 0.40 4	187 3.06 34	240 5.00 55	20 0.56 6	1 0.02	0.5	0.37	6	585	534	357

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA YNEZ RIVER			45A				
NEAR SOLVANG											
10-1-63 1515	Dry - no flow										DWR
11-14-63 1350	Dry - no flow										DWR
12-2-63 1315	Dry - no flow										DWR
1-3-64 0900 Clear; some foam	3.36 6 est.	8.4	13 6.2	0.00	0.02		29		13.4	129	DWR
2-4-64 1345 Clear; green algae on surface	3.36 6 est.	8.0	62 0.45				25		14.0	141	DWR
3-3-64 1020 Clear; green algae and scum on upper banks	3.41 10 est.	7.7	6.2 240				29		10.0	93	DWR
4-6-64 1220 Clear; some foam	3.57 4 est.	7.8	240 62	0.30	0.06		29		10.6	101	DWR
5-4-64 1520 Yellowish tinge; vegetation growing in streambed	3.53 7 est.	8.0	240 [illegible]				25		12.8	127	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR SOLVANG						SANTA YNEZ RIVER					45A						
10- 1-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
11-14-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
12- 2-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
1- 3-64	57	8.3	1222	108 5.39 37	78 6.41 43	66 2.87 19	3 0.08 1	24 0.80 6	373 6.11 42	293 6.10 42	54 1.52 10	0.5 0.01	0.5	0.36	30	840 841	590
2- 4-64	61	8.0	1131	92 4.59 34	70 5.76 43	70 3.04 23	3 0.08 1	0	405 6.64 48	270 5.62 41	52 1.47 11	0.5 0.01	0.4	0.32	27	830 784	518
3- 3-64	54	7.9	1142	102 5.09 36	74 6.09 44	63 2.74 20	3 0.08 1	0	420 6.88 50	269 5.60 40	49 1.38 10	0.5 0.01	0.4	0.32	23	800 791	559
4- 2-64	56	8.1	902	93 4.64 43	46 3.78 35	52 2.26 21	3 0.08 1	0	305 5.00 46	216 4.50 42	45 1.27 12	1.0 0.02	0.6	0.34	29	640 636	421
5- 4-64	65	8.0	1030	81 4.04 33	69 5.67 46	59 2.57 21	2 0.05	0	342 5.61 46	258 5.37 44	44 1.24 10	0.8 0.01	0.5	0.37	26	715 709	486

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number: SANTA YNEZ RIVER 45A											
NEAR SOLVANG											
6-2-64 0930 Clear; small fish and tadpoles observed	3.29 2 est.	8.0	62 62				25		9.0	103	DWR
7-1-64 1635	Dry - no flow										DWR
8-4-64 1015	Dry - no flow										DWR
9-1-64 1350	Dry - no flow										DWR

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR SOLVANG — SANTA YNEZ RIVER — 45A																	
6- 2-64	73	8.1	1099	94 4.69 35	73 6.00 45	62 2.70 20	3 0.08 1	0	373 6.11 46	277 5.77 43	49 1.38 10	1.2 0.02	1.1	0.41	24	831 768	535
7- 1-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
8- 4-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
9- 1-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number											
			MATILIJA CREEK				45B				
ABOVE DAM											
10-2-63 0945 Clear; fish observed	2.38 1.9	8.0	13 21				< 25		10.0	111	DWR
11-14-63 1645 Clear; trout observed	2.42 2.3	7.8	6.2 0.6				< 25		8.0	83	DWR
12-3-63 0945 Clear; sulfur odor	2.49 4.0	7.8	0.6 2.0				< 25		9.0	88	DWR
1-15-64 1755 Clear; sulfur odor	2.48 4.0	8.0	2.3 < 0.45				< 25		8.4	7.9	DWR
2-5-64 1230 Clear; sulfur odor; fish observed	2.51 5.8	7.9	< 0.45 < 0.45				< 25		10.0	100	DWR
3-4-64 1150 Clear; green algae on bottom; sulfur odor	2.50 4.5	7.8	0.6 < 0.45				< 25		9.6	97	DWR
4-2-64 1340 Clear; large flow due to recent rain	2.87 32	7.9	2.3 23				< 25		11.0	107	DWR
5-5-64 1315 Clear	2.54 6.8	7.8	< 0.45 < 0.45				< 25		10.0	97	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number						MATILIJA CREEK					45B						
ABOVE DAM																	
10- 2-63	70	7.9	1185	--	--	96 4.17	--	--	232 3.80	--	104 2.93	--	--	2.50	--		418
11-14-63	64	8.0	1227	130 6.49 48	33 2.71 20	98 4.26 31	4 0.10 1	0	281 4.61 34	288 6.00 44	102 2.88 21	0.5 0.01	1.6	2.90	24	810 822	460
12- 3-63	58	8.0	1211	131 6.54 49	37 3.04 23	87 3.78 28	3 0.08 1	0	278 4.56 34	329 6.85 51	74 2.09 15	0.5 0.01	1.2	2.10	20	830 821	479
1-15-64	55	8.0	1151	123 6.14 47	38 3.13 24	86 3.74 29	3 0.08 1	0	288 4.72 36	311 6.48 50	66 1.86 14	0.5 0.01	1.5	2.10	20	800 793	464
2- 5-64	60	7.9	1044	113 5.64 48	33 2.71 23	75 3.26 28	3 0.08 1	0	249 4.08 35	304 6.33 54	48 1.35 11	1.0 0.02	0.8	1.50	18	760 720	418
3- 4-64	61	8.0	1054	123 6.14 50	34 2.80 23	74 3.22 26	3 0.08 1	0	259 4.25 35	300 6.25 52	55 1.55 13	0.5 0.01	1.1	1.70	18	755 738	447
4- 2-64	58	8.2	876	121 6.04 58	29 2.38 23	46 2.00 19	2 0.05	0	259 4.25 41	268 5.58 53	22 0.62 6	1.0 0.02	0.7	0.75	23	640 641	421
5- 5-64	57	7.8	996	118 5.89 50	34 2.80 24	68 2.96 25	2 0.05	0	244 4.00 34	313 6.52 55	45 1.27 11	1.8 0.03	0.9	1.50	17	714 721	435

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				MATILIJA CREEK			45B				
ABOVE DAM											
6-2-64 1330 Clear	2.46 3.1	7.8	6.2 6.0				<25		9.2	96	DWR
7-2-64 1650 Clear; small fish observed	2.39 1.7	7.7	6.2 23				<25		8.6	101	DWR
8-4-64 1415 Clear	2.35 0.9	7.8	23 6.2				--		8.0	96	DWR
9-1-64 1625 Clear; some foam; small fish observed	2.38 0.9	7.7	130 23	0.02	0.04		<25		9.6	117	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
ABOVE DAM						MATILIJA CREEK					45B						
6- 2-64	64	7.8	1054	115 5.74 48	35 2.88 24	76 3.30 28	3 0.08 1	0	243 3.98 34	293 6.10 52	62 1.75 15	0.1	0.5	2.30	18	785 724	431
7- 2-64	76	8.1	1087	111 5.54 45	35 2.88 24	86 3.74 31	3 0.08 1	0	242 3.97 32	288 6.00 49	79 2.23 18	1.0 0.02	1.5	2.20	22	796 748	421
8- 4-64	85	7.8	1139	102 5.09 41	35 2.88 23	101 4.39 35	3 0.08 1	0	214 3.51 28	266 5.54 45	115 3.24 26	1.6 0.03	1.7	2.95	20	820 753	399
9- 1-64	79	8.1	1234	114 5.69 43	33 2.71 21	108 4.70 36	4 0.10 1	0	238 3.90 30	251 5.23 40	142 4.00 30	1 0.02	1.8	3.45	22	867 797	420

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA CLARA RIVER 46							
AT LOS ANGELES - VENTURA COUNTY LINE											
10-2-63 1930 Clear	3.98 0.15	8.0	6.2 130	0.0	0.08		< 25		9.4	105	DWR
11-15-63 1205 Clear	4.15 1.6	7.8	50 6.2				< 25		8.8	88	DWR
11-20-63 1235 Clear; sample foams when shaken	-- 4 est.	--	--				--		--	--	DWR
12-3-63 1425 Clear; small fish observed	4.08 1.1	7.6	50 23				< 25		9.2	93	DWR
1-15-64 1345 Clear; red floating algae; white salt on banks	4.24 1.4	8.0	1.3 0.6				< 25		12.4	12.0	DWR
1-21-64 1310 Turbid due to storm runoff	4.44 15.9	--	--				5000		--	--	DWR
2-5-64 1630 Clear; earthwork being done around station	3.84 1.6	8.1	5. 6.2				< 25		9.4	95	DWR
3-4-64 1630 Clear; banks have quicksand bases	3.84 1.5	7.6	23 0.6				< 25		9.2	97	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT L. A. - VENTURA CO. L.				SANTA CLARA RIVER 46														
10- 2-63	70	7.9	4218	--	--	526	--	--	415	--	250	--	--	1.50	--			1473
						22.87			6.80		7.05							
11-15-63	60	7.9	3623	259	156	450	7	0	425	1567	202	1.0	1.0	1.36	16	2930		1289
				12.92	12.83	19.57	0.18		6.97	32.62	5.70	0.02						
				28	28	43			15	72	13					2869		
11-20-63	67	8.1	2920	255	131	400	8	0	331	1489	177	0	1.0	1.23	11	2816		1175
				12.72	10.77	17.39	0.20		5.43	31.00	4.99							
				31	26	42			13	75	12					2636		
12- 3-63	60	7.9	3546	281	133	430	9	0	407	1530	190	0.5	1.2	1.26	17	2880		1249
				14.02	10.94	18.70	0.23		6.67	31.85	5.36	0.01						
				32	25	43	1		15	73	12					2793		
1-15-64	58	8.1	3289	244	150	410	7	0	420	1440	174	0.5	1.5	1.16	17	2720		1227
				12.18	12.34	17.83	0.18		6.88	29.98	4.91	0.01						
				29	29	42			16	72	12					2652		
1-21-64	--	7.2	1205	121	40	98	11	0	222	413	46	1.5	0.7	0.44	16	900		467
				6.04	3.29	4.26	0.28		3.64	8.60	1.30	0.02						
				44	24	31	2		27	63	10					857		
2- 5-64	62	8.1	3155	255	133	380	8	0	439	1374	162	1.5	0.9	1.20	18	2700		1184
				12.72	10.94	16.52	0.20		7.20	28.61	4.57	0.02						
				32	27	41			18	71	11					2549		
3- 4-64	66	8.0	3155	250	149	380	7	0	407	1419	163	0.5	1.2	1.15	16	2715		1237
				12.48	12.25	16.52	0.18		6.67	29.54	4.60	0.01						
				30	30	40			16	72	11					2587		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA CLARA RIVER			46				
AT LOS ANGELES - VENTURA COUNTY LINE											
4-2-64 1635 Slightly turbid; some foam; road washed out at sampling point	3.78 2.2	7.8	130 240	0.78	0.08		200		9.8	95	DWR
5-5-64 1705 Clear	3.72 1.7	7.6	13 0.6				<25		9.4	94	DWR
6-2-64 1800 Clear	3.68 1.2	7.7	29 13				<25		9.6	117	DWR
7-3-64 1420 Clear	3.66 0.30	7.4	2.3 2.3				<25		10.8	136	DWR
8-4-64 1710 Clear	3.63 0.50	7.6	2.3 240				--		13.6	156	DWR
9-2-64 1325 Clear; small fish observed	3.36 0.25 est.	7.8	13 1.3	0.05	0.09		<25		10.4	127	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number AT L. A. - VENTURA CO. L.						SANTA CLARA RIVER					46						
4- 2-64	67	7.9	2907	266 13.27 35	129 10.61 28	325 14.13 37	10 0.26 1	0	468 7.67 20	1262 26.27 69	143 4.03 11	2.0 0.03	1.1	1.10	25	2470 2394	1195
5- 5-64	59	7.8	2900	238 11.88 31	137 11.27 30	339 14.74 39	7 0.18	0	403 6.61 18	1290 26.86 72	144 4.06 11	1.8 0.03	1.1	1.12	19	2489 2376	1158
6- 2-64	79	7.7	3184	246 12.28 30	150 12.34 30	384 16.70 40	8 0.20	0	371 6.08 15	1427 29.71 73	175 4.94 12	2.0 0.03	1.7	1.36	17	2820 2594	1232
7- 3-64	82	7.7	3556	232 11.58 25	173 14.23 31	458 19.91 43	8 0.20	0	327 5.36 12	1658 34.52 75	212 5.98 13	1.0 0.02	1.4	1.45	20	3120 2926	1292
8- 4-64	88	8.2	4735	248 12.38 20	229 18.83 31	684 29.74 49	10 0.26	13 0.43 1	214 3.51 6	2288 47.64 79	320 9.02 15	0.8 0.01	1.6	2.20	18	4258 3920	1562
9- 2-64	79	8.0	4556	261 13.02 23	211 17.35 30	624 27.13 47	9 0.23	0	273 4.47 8	2171 45.20 78	296 8.35 14	13 0.21	1.0	2.00	20	4015 3742	1520

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA CLARA RIVER			46A				
NEAR SANTA PAULA											
10-2-63 1200 Slightly turbid	None 20 est.	7.8	62 62	0.00	0.04		25		9.0	103	DWR
11-15-63 0900 Slightly turbid	None 15 est.	8.0	23 23				30		8.2	86	DWR
12-3-63 1230 Clear; some foam; high flow	None 30 est.	7.8	50 6.2	0.06	0.08		<25		9.6	102	DWR
1-15-64 1635 Clear; white salt on bank; dead fish in water	None 10 est.	7.4	50 62				<25		11.6	113	DWR
2-5-64 1400 Clear	None 20 est.	8.0	<0.45 <0.45				<25		11.8	123	DWR
3-4-64 1415 Clear	None 15 est.	7.8	23 23				<25		11.0	115	DWR
4-2-64 1515 Turbid; some foam; large flow due to recent rain	None 220 est.	7.6	62 62	0.08	0.06		750		9.8	98	DWR
5-5-65 1455 Clear; some vegetation floating in the water	None 25 est.	7.6	62 1.3				<25		10.8	111	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR SANTA PAULA						SANTA CLARA RIVER 46A												
10- 2-63	73	8.1	1936	--	--	147 6.39	--	--	336 5.51	--	70 1.97	--	--	0.86	--			832
11-15-63	64	7.8	1996	204 10.18 42	85 6.99 29	160 6.96 29	7 0.18 1	0	344 5.64 23	788 16.41 68	71 2.00 8	7.0 0.11	1.0	0.92	26	1555 1519		859
12- 3-63	65	8.0	1972	198 9.88 41	82 6.74 28	165 7.17 30	7 0.18 1	0	356 5.83 24	765 15.93 66	73 2.06 9	8.5 0.14 1	1.0	0.92	27	1545 1502		832
1-15-64	58	7.9	2315	225 11.23 38	111 9.13 31	210 9.13 31	8 0.20 1	0	364 5.97 20	995 20.72 71	88 2.48 8	11 0.18 1	1.4	1.04	28	1910 1857		1019
2- 5-64	64	8.1	1855	189 9.43 41	79 6.50 28	162 7.04 30	7 0.18 1	0	344 5.64 24	744 15.49 67	70 1.97 8	9.0 0.15 1	1.5	0.90	25	1550 1457		797
3- 4-64	64	7.8	1832	200 9.98 44	76 6.25 27	150 6.52 28	6 0.15 1	0	322 5.28 23	740 15.41 68	67 1.89 8	8.0 0.13 1	0.9	0.86	27	1515 1434		812
4- 2-64	64	7.6	687	77 3.84 51	23 1.89 25	38 1.65 22	3 0.08 1	0	159 2.61 36	197 4.10 56	21 0.59 8	2.5 0.04 1	0.7	0.58	20	475 461		287
5- 5-64	62	7.3	1901	198 9.88 41	83 6.83 29	162 7.04 29	6 0.15 1	0	283 4.64 20	765 15.93 68	99 2.79 12	8.2 0.13 1	1.0	1.00	26	1566 1488		836

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA CLARA RIVER			46A				
NEAR SANTA PAULA											
6-2-64 1530 Clear	None 15 est.	7.6	23.0 6.2				<25		10.2	112	DWR
7-3-64 1305 Clear	None 15 est.	7.6	62 62				<25		11.4	127	DWR
8-4-64 1540 Clear	None 12 est.	7.8	700 240				--		11.2	127	DWR
9-2-64 1100 Clear	None 10 est.	7.4	240 240				<25		9.2	96	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR SANTA PAULA				SANTA CLARA RIVER 46A													
6- 2-64	69	7.7	2372	249 12.43 40	106 8.72 28	220 9.57 31	8 0.20 1	0	340 5.57 18	1061 22.09 73	86 2.43 8	7.6 0.12	1.1	1.20	24	2100 1931	1058
7- 3-64	70	7.7	2343	238 11.88 39	110 9.05 30	212 9.22 30	8 0.20 1	0	328 5.38 18	1082 22.53 74	88 2.48 8	10 0.16 1	1.2	1.00	33	2132 1944	1047
8- 4-64	72	8.0	2084	216 10.78 40	93 7.65 29	186 8.09 30	7 0.18 1	0	330 5.41 21	889 18.51 71	76 2.14 8	8 0.13	1.2	1.00	29	1800 1668	922
9- 2-64	64	7.9	2278	242 12.08 42	96 7.90 28	196 8.52 30	8 0.20 1	0	347 5.69 20	970 20.20 71	88 2.48 9	8 0.13	1.4	1.02	29	1990 1810	1000

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				PIRU CREEK			46C				
NEAR PIRU											
10-2-63 1845 Slightly turbid; swimmers in the water	None 10 est.	8.0	13 700 +				< 25		9.0	100	DWR
11-15-63 1110 Clear	None 12 est.	8.2	23 23				< 25		9.8	99	DWR
12-3-63 1405 Clear; small fish observed	None 5 est.	8.0	2.3 23				< 25		10.0	98	DWR
1-15-64 1415 Clear	None 3 est.	8.0	0.6 2.3				< 25		13.0	119	DWR
2-5-64 1555 Clear; yellowish tinge; some foam	None 5 est.	8.1	0.6 < 0.45				< 25		10.2	104	DWR
3-4-64 1600	None 3 est.	7.8	23 6.2				< 25		9.4	99	DWR
4-2-64 1615 Clear	None 4 est.	7.6	6.2 6.2				< 25		8.6	94	DWR
5-5-64 1630 Clear; released from Santa Felicia Reservoir	None 5 est.	7.8	2.3 6.2				< 25		10.0	96	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR PIRU				PIRU CREEK							46C						
10- 2-63	70	8.3	1572	--	--	120 5.22	--	7 0.23	237 3.88	--	39 1.10	--	--	1.20	--		637
11-15-63	61	8.0	1565	148 7.39 40	68 5.59 30	125 5.44 29	7 0.18 1	0	322 5.28 29	584 12.16 66	37 1.04 6	0.5 0.01	1.1	1.34	24	1180 1154	650
12- 3-63	58	8.0	1464	132 6.59 38	64 5.26 30	120 5.22 30	7 0.18 1	0	283 4.64 27	545 11.35 67	35 0.99 6	1.0 0.02	1.2	1.26	17	1090 1063	593
1-15-64	53	8.3	1675	152 7.58 38	76 6.25 31	138 6.00 30	7 0.18 1	14 0.47 2	298 4.88 25	621 12.93 66	42 1.18 6	0.5 0.01	1.5	1.28	20	1275 1220	692
2- 5-64	62	7.9	1894	155 7.73 32	89 7.32 31	200 8.70 36	7 0.18 1	0	361 5.92 25	785 16.34 68	53 1.49 6	11 0.18 1	1.9	1.50	20	1570 1501	753
3- 4-64	65	7.9	1582	159 7.93 41	73 6.00 31	126 5.48 28	6 0.15 1	0	293 4.80 25	629 13.10 68	45 1.27 7	1.0 0.02	1.2	1.35	18	1270 1204	697
4- 2-64	68	8.0	1825	191 9.53 41	85 6.99 30	155 6.74 29	7 0.18 1	0	368 6.03 26	761 15.84 68	50 1.41 6	0.5 0.01	1.3	1.60	23	1530 1456	827
5- 5-64	58	7.7	1773	178 8.88 39	85 6.99 31	151 6.57 29	6 0.15 1	0	344 5.64 25	727 15.14 68	51 1.44 6	0.8 0.01	1.1	1.90	18	1445 1389	794

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				PIRU CREEK			46C				
NEAR PIRU											
6-2-64 1730 Clear	None 0.5 est.	7.8	6.2 62				< 25		10.8	127	DWR
7-3-64 1405 Clear	None 1 est.	7.9	23 130				< 25		12.0	152	DWR
8-4-64 1650 Clear	None 0.5 est.	7.8	62 62				< 25		10.4	128	DWR
9-2-64 1305 Clear	None 0.25 est.	7.5	240 240				< 25		9.0	96	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR PIRU						PIRU CREEK					46C						
6- 2-64	76	8.0	1838	176	88	162	6	0	271	805	55	1.0	1.6	1.95	14	1548	802
				8.78	7.24	7.04	0.15		4.44	16.76	1.55	0.02					
				38	31	30	1		19	74	7					1444	
7- 3-64	83	7.9	1564	145	74	127	7	0	231	674	44	1	1.4	1.50	37	1277	667
				7.24	6.09	5.52	0.18		3.79	14.03	1.24	0.02					
				38	32	29	1		20	74	6					1225	
8- 4-64	80	8.1	1736	156	87	147	7	0	257	741	51	2	1.5	1.85	20	1497	747
				7.78	7.15	6.39	0.18		4.21	15.43	1.44	0.03					
				36	33	30	1		20	73	7					1341	
9- 2-64	66	7.9	1778	173	80	144	7	0	286	727	55	1	1.7	1.80	23	1460	761
				8.63	6.58	6.26	0.18		4.69	15.14	1.55	0.02					
				40	30	29	1		22	71	7					1354	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SESPE CREEK			46D				
NEAR FILLMORE											
10-2-63 1800 Turbid; oil slick on surface	2.19 2.6	8.4	62 23				50		9.2	106	DWR
11-15-63 1015 Clear; oil slick on surface	2.30 18	8.2	6.2 2.3				<25		10.8	110	DWR
12-3-63 1305 Clear; oil slick on surface; fish observed	2.29 4.6	8.0	2.3 <0.45				<25		11.2	106	DWR
12-3-63 -- 	2.46 8.9	--	--				--		--	--	FGL
1-15-64 1505 Clear	1.97 0.6	7.8	0.6 2.3				<25		9.2	85	DWR
2-5-64 1305 Clear; evidence of recent high flow	2.77 21	8.1	6.2 23				<25		11.0	102	DWR
3-3-64 0845 	2.38 1.7	--	--				--	--	--	--	FGL
3-4-64 1550 Clear; oil slick on surface	2.17 2.4	7.6	23 2.3				<25		10.2	103	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR FILLMORE						SESPE CREEK						46D					
10- 2-63	74	7.9	1270	--	--	122 5.30	--	--	246 4.03	--	128 3.61	--	--	2.30	--		396
11-15-63	62	8.1	1138	88 4.39 37	27 2.22 19	118 5.13 43	3 0.08 1	0	203 3.33 28	218 4.54 39	135 3.81 33	0.5 0.01	1.8	3.10	12	700 706	331
12- 3-63	56	7.9	1221	107 5.34 40	34 2.80 21	118 5.13 38	4 0.10 1	0	237 3.88 29	314 6.54 49	100 2.82 21	0.5 0.01	2.4	2.30	22	820 821	407
12- 3-63	--	8.1	1242	125 6.24	31 2.55	113 4.91	--	--	223 3.65	357 7.43	96 2.71	--	1.8	2.65	--	866	440
1-15-64	54	8.1	1477	159 7.93 46	44 3.62 21	129 5.61 33	4 0.10 1	0	281 4.61 27	481 10.01 59	87 2.45 14	0.5 0.01	2.4	2.40	17	1060 1064	578
2- 5-64	54	8.1	1127	111 5.54 43	34 2.80 22	102 4.43 34	3 0.08 1	0	232 3.80 30	349 7.27 56	63 1.78 14	1.0 0.02	2.2	1.70	17	860 798	417
3- 3-64	--	8.1	1253	119 5.94	32 2.63	103 4.48	--	--	227 3.72	354 7.37	77 2.17	--	1.9	2.15	--	871	429
3- 4-64	61	7.9	1242	132 6.59 46	38 3.13 22	107 4.65 32	3 0.08 1	0	251 4.11 29	390 8.12 57	74 2.09 15	0.5 0.01	1.7	2.00	17	895 889	486

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SESPE CREEK 46D							
NEAR FILLMORE											
4-2-64 1555 Turbid; high, rapid -	3.86 236	8.0 flow due to	240 62 recent rain				325		10.6	101	DWR
5-5-64 1538 Clear	2.68 13	7.9	--				<25		12.0	113	DWR
6-1-64 --	1.87 0.5	--	--				--		--	--	FGL
6-2-64 1645 Clear	1.86 0.2	7.8	1.3 6.2				<25		9.8	116	DWR
7-3-64 1340 Clear; green algae	1.95 0.4	7.6	2.3 6.2				<25		12.2	149	DWR
8-4-64 1620 Clear	1.92 0.1	7.6	5.0 6.2				--		11.8	153	DWR
9-1-64 1000	1.98 0.23	--	--				--		--	--	FGL
9-?-64 1230 Clear; insects	1.97 0.2	7.5	2.3 6.2				<25		11.2	130	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C	TDS Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR FILLMORE				SESPE CREEK							46D								
4- 2-64	56	7.8	589	70 3.49 54	20 1.64 25	30 1.30 20	2 0.05 1	0	156 2.56 40	165 3.44 53	15 0.42 7	1.5 0.02	0.7	0.50	14	400		395	257
5- 5-64	55	7.6	969	93 4.64 43	30 2.47 23	84 3.65 34	3 0.08 1	0	183 3.00 28	283 5.89 55	63 1.78 17	0.6 0.01	1.7	1.80	12	664		662	356
6- 1-64	--	8.0	1733	192 9.58	63 5.18	129 5.61	--	--	258 4.23	690 14.37	68 1.92	--	1.4	1.77	--	1306			739
6- 2-64	76	7.8	1567	188 9.38 49	55 4.52 23	122 5.30 27	5 0.13 1	0	233 3.82 20	632 13.16 70	67 1.89 10	1.2 0.02	1.6	1.75	19	1255		1207	696
7- 3-64	80	7.7	1344	135 6.74 44	39 3.21 21	118 5.13 34	5 0.13 1	0	188 3.08 20	467 9.72 64	84 2.37 16	1 0.02	1.6	1.95	14	1015		959	498
8- 4-64	85	7.6	1389	134 6.69 43	40 3.29 21	128 5.57 36	5 0.13 1	0	165 2.70 18	469 9.76 64	101 2.85 19	1.8 0.03	1.5	2.25	13	1040		977	499
9- 1-64	--	7.9	1486	134 6.69	34 2.80	128 5.57	--	--	188 3.08	418 8.70	121 3.41	--	1.3	2.43	--	1027			475
9- 2-64	74	8.0	1330	127 6.34 45	31 2.55 18	120 5.22 37	4 0.10 1	0	173 2.84 20	382 7.95 56	121 3.41 24	1 0.02	1.6	2.30	11	940		886	445

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA PAULA CREEK 46E							
NEAR SANTA PAULA											
10-[illegible]-63 1100 Clear	1.74 0.8	8.2	700 23				<25		12.2	139	DWR
11-19-63 0800 Clear	1.34 0.6	7.3	13 6.2	0.70	0.03		<25		9.8	99	DWR
12-3-63 1135 Clear; some foam	1.42 2 est.	7.8	2.3 6.2	0.02	0.12		<25		10.6	101	DWR
12-6-63 --	1.41 3.8	--	--				--		--	--	FGL
1-15-64 1715 Clear; some foam	1.69* 2.8	7.8	6.2 0.6	0.00	0.06		<25		8.4	76	DWR
1-22-64 1600	2.05* 20.2	--	--				3500		--	--	DWR
1-23-64 1300 Amber-colored	1.90* 30 est.	--	--				--		--	--	DWR
2-3-64 1335 Clear	1.82* 6.1	7.9	9.6 1.3				<25		11.0	107	DWR

*New gage

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR SANTA PAULA				SANTA PAULA CREEK 46E													
10- 2-63	72	7.9	1222	-- --	-- --	116 5.04	-- --	-- --	312 5.11	-- --	84 2.37	-- --	--	0.59	--		402
11-15-63	61	7.9	1196	100 4.99 38	36 2.96 22	120 5.22 39	3 0.08 1	0 0 0	325 5.33 40	271 5.64 42	82 2.31 17	0.5 0.01 0	0.7	0.70	15	780 789	398
12- 3-63	56	8.0	1144	116 5.79 45	35 2.88 22	96 4.17 32	2 0.05 1	0 0 0	305 5.00 39	285 5.93 46	67 1.89 15	1.0 0.02 0	0.6	0.40	22	780 775	434
12- 6-63	--	7.7	1190	116 5.79 45	33 2.71 21	95 4.13 32	-- --	-- --	287 4.70 37	277 5.77 45	70 1.97 15	-- --	0.4	0.40	--	782 775	425
1-15-64	52	8.1	1106	96 4.79 39	38 3.13 25	100 4.35 35	2 0.05 1	0 0 0	298 4.88 39	270 5.62 45	68 1.92 15	1.0 0.02 0	0.6	0.50	15	735 738	396
1-22-64	49	7.7	803	88 4.39 49	23 1.89 21	60 2.61 29	2 0.05 1	0 0 0	224 3.67 41	197 4.10 46	38 1.07 12	2.5 0.04 0	0.6	0.64	15	570 537	314
1-29-64	52	8.2	860	59 2.94 28	56 4.61 44	64 2.78 27	2 0.05 1	0 0 0	253 4.15 40	240 5.00 48	46 1.30 12	3.2 0.05 0	0.2	0.33	11	642 606	378
2- 5-64	58	8.0	922	86 4.29 41	31 2.55 24	82 3.57 34	2 0.05 1	0 0 0	259 4.25 40	239 4.98 47	50 1.41 13	1.0 0.02 0	0.6	0.36	15	660 634	342

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number: SANTA PAULA CREEK 46E											
NEAR SANTA PAULA											
3-3-64 1000	1.50 10.1	--	--				--		--	--	FGL
3-4-64 1310 Clear; some foam	1.78* 3.6	7.9	2.3 2.3				⩽25		10.2	104	DWR
4-2-64 1450 Turbid; insects; large flow due to recent rain	2.34* 32	7.8	6.2 13				⩽25		11.4	109	DWR
5-5-64 1430 Clear; some foam	1.78* 6.9	7.8	⩽0.45 0.6	0.0	0.06		⩽25		11.0	101	DWR
6-1-64 0830	1.43 1.0	--	--				--		--	--	FGL
6-2-64 1455 Clear; some foam	1.66* 2.2	7.9	6.2 6.2				⩽25		11.8	141	DWR
7-3-64 1230 Clear; foam	1.53* 0.9	8.0	13 23				⩽25		13.4	152	DWR
8-4-64 1505 Clear	1.44* 0.5	7.8	23 2.3				--		11.0	137	DWR

*New gage

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR SANTA PAULA				SANTA PAULA CREEK 46E													
3- 3-64	--	7.7	1172	104 5.19	35 2.88	91 3.96	--	--	290 4.75	270 5.62	62 1.75	--	0.4	0.57	--	725	404
3- 4-64	62	8.0	983	88 4.39 39	34 2.80 25	90 3.91 35	2 0.05	0	254 4.16 37	259 5.39 48	57 1.61 14	0.5 0.01	0.6	0.42	14	690 670	360
4- 2-64	56	8.1	497	64 3.19 58	13 1.07 19	28 1.22 22	1 0.03 1	0	166 2.72 49	117 2.44 44	15 0.42 8	1.0 0.02	0.4	0.12	19	330 340	213
5- 5-64	54	7.9	896	86 4.29 43	30 2.47 25	73 3.17 32	2 0.05 1	0	251 4.11 41	221 4.60 46	46 1.30 13	1.6 0.03	0.6	0.38	13	614 597	338
6- 1-64	--	7.8	1057	99 4.94	29 2.38	87 3.78	--	--	299 4.90	229 4.77	60 1.69	--	0.4	0.86	--	725	366
6- 2-64	77	8.0	900	78 3.89 39	30 2.47 25	82 3.57 36	2 0.05 1	0	225 3.69 37	227 4.73 48	53 1.49 15	0.8 0.01	0.6	0.47	14	630 598	318
7- 3-64	72	8.0	1020	82 4.09 37	34 2.80 25	97 4.22 38	2 0.05	0	256 4.20 37	249 5.18 46	66 1.86 17	2 0.03	0.6	0.48	26	708 685	345
8- 4-64	81	7.9	1186	69 3.44 27	34 2.80 22	147 6.39 50	2 0.05	0	259 4.25 33	275 5.73 45	100 2.82 22	1.0 0.02	0.7	0.90	17	800 774	312

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA PAULA CREEK			46E				
NEAR SANTA PAULA											
9-1-64 1050	1.32 1.3	--	--				--		--	--	FGL
9-2-64 1010 Clear	1.28 0.1	7.8	240 62				<25		13.2	136	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR SANTA PAULA				SANTA PAULA CREEK 46E													
9- 1-64	--	8.3	1404	92 4.59	37 3.04	149 6.48	--	--	378 6.20	241 5.02	106 2.99	--	0.4	1.07	--	1127	382
9- 2-64	63	7.8	1328	97 4.84 33	39 3.21 22	146 6.35 44	3 0.08 1	0	356 5.83 40	274 5.70 39	108 3.05 21	1 0.02	0.7	0.86	17	895 862	403

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES RIVER 47							
AT FIGUEROA STREET											
10-2-63 1058 Clear	0.57 0.1	8.0	110					0	7.04	81	LACHD
12-4-63 1020 Clear	0.01 0.2	7.9	15					0.00	6.4	61	LACHD
1-8-64 1340 Slightly turbid; yellow color, musty odor	0.02 0.05	8.2	110+					0.01	18.2	173	LACHD
3-4-64 1145 Clear	0.03 0.3	8.0	110+					0.07	7.3	75	LACHD
4-8-64 0950 Oil and grease: 0.0; 5 day B.O.D. = 2.5 ppm	0.01 0.05	--	9.3						9.4	93	LACHD
5-6-64 1505 Clear; some foam	0.05 0.4	8.0	620 2400				30		9.6	108	DWR
6-3-64 1100	0.05 0.05	8.2	11.5					0.04	11.75	131	LACHD
8-5-64 1945 Clear; trash in streambed; green algae	0.03 0.01	8.4	230 230				35		4.4	35	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents percent reactance million value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT FIGUEROA STREET				LOS ANGELES RIVER 47													
	74	--	--	112	82	414	--	80	300	601	440	0	--	--	--	1386	617
10- 2-63				5.59	6.74	18.00		2.67	4.92	12.51	12.41						
				18	22	59		8	15	38	38					1877	
	58	--	--	91	33	315	--	0	365	275	300	2.2	--	--	--	1315	363
12- 4-63				4.54	2.71	13.70			5.98	5.73	8.46	0.04					
				22	13	65			30	28	42					1196	
	56	8.2	--	91	51	340	--	0	217	489	344	2.1	--	--	--	1636	437
1- 8-64				4.54	4.19	14.78			3.56	10.18	9.70	0.03					
				19	18	63			15	43	41					1424	
	62	--	--	103	32	200	--	0	235	276	200	4.0	--	--	--	1065	389
3- 4-64				5.14	2.63	8.70			3.85	5.75	5.64	0.06					
				31	16	53			25	38	37					931	
	60	8.1	--	76	31	307	6	0	335	236	266	0.0	--	--	--	1190	317
4- 8-64				3.79	2.55	13.35	0.15		5.49	4.91	7.50						
				19	13	67	1		31	27	42					1087	
	71	7.7	2335	85	35	403	8	0	454	302	393	1.4	0.8	1.80	19	1492	356
5- 6-64				4.24	2.88	17.52	0.20		7.44	6.29	11.08	0.02					
				17	12	71	1		30	25	45					1472	
	70	8.2	--	84	46	418	--	0	328	383	414	0.9	--	--	--	1655	399
6- 3-64				4.19	3.78	18.17			5.38	7.97	11.67	0.01					
				16	14	70			21	32	47					1507	
	78	8.1	2704	58	49	463	10	0	120	624	447	1.0	1.1	1.70	7	1829	346
8- 5-64				2.89	4.03	20.13	0.26		1.97	12.99	12.61	0.02					
				11	15	74	1		7	47	46					1721	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES RIVER			47				
AT FIGUEROA STREET											
9-14-64 1330 Yellow color, floating green al ae	0.08 0.05	8.4	<0.45 6				<25		14.2	192	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				LOS ANGELES RIVER							47						
AT FIGUEROA STREET																	
	89	8.7	2395	70	65	372	7	22	124	613	340	17	0.8	1.75	14	1624	442
9-14-64				3.49	5.35	16.17	0.18	0.73	2.03	12.76	9.59	0.27					
				14	21	64	1	3	8	50	38	1				1583	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES RIVER			48				
AT PACIFIC COAST HIGHWAY											
10-2-63 1010	0.46 6.4	7.7	24					0.04	0.40	46	LBDPH
Marked turbidity; green color; heavy algae; 5-day BOD = 67 ppm											
11-13-63 1130	0.48 10.5	7.3	13000					0.18	0.2	2	LBDPH
Marked turbidity; brownish color; 5-day BOD = 94.5 ppm; oil and grease = 13 ppm											
12-4-63 1015	0.45 10.3	7.5	620					0.15	0.35	3	LBDPH
Marked turbidity; brownish color; 5-day BOD = 46.0 ppm; oil and grease = 10.0 ppm											
1-8-64 1025	0.50 12.0	8.0	70						3.6	35	LBDPH
Very turbid; blackish color; 5-day BOD = 102.6 ppm; oil and grease = 11 ppm; Alkalinity ($CaCO_3$) = 314 ppm											
2-5-64 1025	0.60 13.0	7.5	130					0.60	--	--	LBDPH
Marked turbidity; brownish color; hydrocarbon odor; 5-day BOD = 212 ppm; oil and grease = 10.0 ppm; Alkalinity ($CaCO_3$) = 416 ppm											
3-4-64 1035	0.61 18.6	7.6	130					0.10	0.5	6	LBDPH
Marked turbidity; grayish color; 5-day BOD = 602 ppm; oil and grease = 38.8 ppm; Alkalinity ($CaCO_3$) = 606 ppm											
4-8-64 1020	0.47 69.8	7.5	240					0.03	0.4	4	LBDPH
Very turbid; brownish color; 5-day BOD = 282 ppm; Oil and grease = 23 ppm											
5-6-64 1425	0.51 12.5	7.4	<45 <45			93	60		2.0	25	DWR
Slightly turbid; black algae; hydrocarbon odor											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				LOS ANGELES RIVER							48						
AT PACIFIC COAST HIGHWAY																	
10- 2-63	73	--	--	200 9.98 6	213 17.52 11	3000 130.44 83	--	0	244 4.00 3	500 10.41 7	4960 139.87 91	0.0	--	--	--	9580 8993	1376
11-13-63	66	--	--	254 12.67 6	250 20.56 10	4000 173.92 84	--	0	290 4.75 2	496 10.33 5	7035 198.39 93	0.9 0.01	--	--	--	12866 12178	1663
12- 4-63	59	--	--	340 16.97 4	650 53.46 14	7300 317.40 82	--	0	227 3.72 1	1557 32.42 8	12681 357.60 91	0.0	--	--	--	25638 22640	3524
1- 8-64	57	8.0	--	285 14.22 6	25 2.06 1	4750 206.53 93	--	0	314 5.15 2	535 11.14 4	8377 236.23 94	2.4 0.04	--	--	--	13486 14129	815
2- 5-64	62	7.5	--	350 17.47 7	85 6.99 3	5600 243.49 91	--	0	419 6.87 3	190 3.96 2	8500 239.70 96	0.9 0.01	--	--	--	15440 14932	1224
3- 4-64	78	--	--	590 29.44 6	285 23.44 5	10000 434.80 89	--	0	606 9.93 2	29 0.60	17164 484.02 98	0.4 0.01	--	--	--	29390 28366	2646
4- 8-64	69	7.5	--	452 22.55	230 18.92	5600 243.49	--	--	--	136 2.83	14342 404.44	0.0	--	0	405	20232	2075
5- 6-64	82	7.4	41824	619 30.89 6	342 28.13 5	10500 456.54 88	88 2.25	0	919 15.06 3	0	18100 510.42 97	2.5 0.04	2.0	40.00	40	31450 30185	2953

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES RIVER			48				
AT PACIFIC COAST HIGHWAY											
6-3-64 1020	0.54 11.1	7.2	30.45						0.00	0	LBDPH
Heavy turbidity; blackish color, no odor; 5-day BOD = 442 ppm; oil and grease = 78 ppm; Alkalinity ($CaCO_3$) = 589 ppm											
7-1-64 1010	0.55 15.4	7.6	0.6					0.60	0.0	0	LBDPH
Marked turbidity; brownish color; hydrocarbon odor; 5-day BOD = 416 ppm; oil and grease = 57 ppm; Alkalinity ($CaCO_3$) = 620 ppm											
8-5-64 1020	-- 4.1	7.2	70.0					0.2	0.0	0	LBDPH
Marked turbidity; oil slick on surface; 5-day BOD = 262 ppm; oil and grease = 18 ppm											
9-14-64 1220	0.58 11	8.0	62 2400			15	.25		1.4	17	DWR
Yellowish color; oil slicks and floating green algae											

MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT PACIFIC COAST HIGHWAY				LOS ANGELES RIVER 48													
6- 3-64	80	7.2	--	672 33.53	245 20.15	11200 486.98	--	0	589 9.65	--	17610 496.60	2.0 0.03	--	--	--	31167	2686
7- 1-64	89	7.6	--	611 30.49 6	300 24.67 5	10500 456.54 89	--	0	620 10.16 2	17 0.35	17215 485.46 98	0.9 0.01	--	--	--	32046 28949	2760
8- 5-64	80	--	--	354 17.66 6	235 19.33 7	5600 243.49 87	--	0	510 8.36 3	360 7.50 3	8155 229.97 94	0.4 0.01	--	--	--	16267 14955	1851
9-14-64	79	7.6	13245	224 11.18 9	91 7.48 6	2544 110.61 85	33 0.84 1	0	402 6.59 5	265 5.52 4	4245 119.71 91	16 0.26	1.0	9.40	26	8425 7652	934

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				RIO HONDO 49							
AT WHITTIER NARROWS											
10-3-63 0800 Clear	1.62 3.0	8.2	23 62				<25		9.4	111	DWR
11-8-63 0830 Clear; small fish and insects observed	1.74 1.0	7.8	7000 620				<25		4.7	46	DWR
12-4-63 1255 Clear; mostly M.W.D. Colorado River water	3.23 100	8.1	4.5 6				<25		9.4	98	DWR
1-3-64 1100 Clear; mostly M.W.D. Colorado River water	3.02 149	8.0	0.60 0.60				<25		10.6	100	DWR
1-22-64 1130 Slightly turbid; evidence of past very high flow	2.51 40	--	--				140		--	--	DWR
2-10-64 1045 Clear	2.84 87	7.7	0.60 0.60				<25		10.2	9.6	DWR
3-5-64 1530 Clear; mostly M.W.D. Colorado River water	3.39 198	7.8	6.2 6.2				<25		9.4	89	DWR
4-4-64 0115 Clear	3.51 195	8.0	2.3 6.2				<25		10.0	94	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number AT WHITTIER NARROWS				RIO HONDO 49													
10- 3-63	76	7.7	1031	--	--	106 4.61	--	--	238 3.90	196 4.08	84 2.37	--	--	0.32	--		297
11- 8-63	59	7.4	985	85 4.24 40	24 1.97 19	93 4.04 38	11 0.28 3	0	224 3.67 35	201 4.18 40	87 2.45 23	8.0 0.13 1	1.1	0.26	26	640 646	311
12- 4-63	65	8.3	1043	80 3.99 36	29 2.38 21	108 4.70 42	5 0.13 1	12 0.40 4	146 2.39 21	283 5.89 52	90 2.54 23	1.5 0.02	0.6	0.12	12	689 693	319
1-13-64	56	8.3	1032	80 3.99 35	31 2.55 23	105 4.57 41	5 0.13 1	14 0.47 4	134 2.20 20	289 6.02 54	87 2.45 22	1.5 0.02	0.6	0.14	13	690 692	327
1-22-64	50	7.5	304	25 1.25 44	8 0.66 23	17 0.74 26	8 0.20 7	0	71 1.16 43	38 0.79 29	23 0.65 24	7.4 0.12 4	0	0.12	--	215 161	96
2-11-64	55	8.2	1017	90 4.49 41	22 1.81 17	103 4.48 41	5 0.13 1	0	161 2.64 24	276 5.75 53	87 2.45 23	2.5 0.04	0.6	0.14	10	740 675	314
3- 5-64	56	8.1	1020	87 4.34 39	30 2.47 22	96 4.17 38	5 0.13 1	0	163 2.67 24	287 5.98 54	88 2.48 22	2.0 0.03	0.6	0.12	11	710 685	341
4- 4-64	55	8.1	1015	90 4.49 40	28 2.30 21	98 4.26 38	5 0.13 1	0	166 2.72 24	286 5.95 53	88 2.48 22	2.5 0.04	0.4	0.18	14	700 694	340

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				RIO HONDO							
AT WHITTIER NARROWS											
7-6-64 1129	1.59 2.7	8.3	23 6.4	0.4	0.16		<25		16.8	165	DWR
6-3-64 1305 Clear; low flow; many tadpoles	1.81 1.6	7.4	62 62				<25		9.5	107	DWR
7-1-64 1100 Clear; low flow	1.73 0.5	7.2	62 62	1.1			<25		7.6	91	DWR
8-5-64 1430 Clear	1.75 0.6	7.3	7900 23				--		12.2	137	DWR
9-14-64 1050	Dry - no flow										

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT WHITTIER NARROWS						RIO HONDO					49						
5- 6-64	69	8.0	916	71 3.54 37	22 1.81 19	93 4.04 42	7 0.18 2	0	216 3.54 37	177 3.69 39	78 2.20 23	2.2 0.04	1.0	0.31	17	579 575	268
6- 4-64	75	7.4	1193	96 4.79 37	29 2.38 18	127 5.52 43	9 0.23 2	0	223 3.65 29	278 5.79 45	114 3.21 25	5.2 0.08 1	1.1	0.37	21	822 790	359
7-13-64	65	7.3	1277	101 5.04 37	29 2.38 17	139 6.04 44	10 0.26 2	0	243 3.98 29	299 6.23 45	124 3.50 25	2 0.03	1.3	0.40	26	892 851	371
8- 5-64	88	9.0	1105	78 3.89 33	31 2.55 21	120 5.22 44	11 0.28 2	29 0.97 8	168 2.75 23	246 5.12 43	105 2.96 25	2.2 0.04	1.3	0.38	27	775 733	321
9-14-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				MISSION CREEK 49A							
AT WHITTIER NARROWS											
10-3-63 1015	Dry - no flow										DWR
11-8-63 0745	Dry - no flow										DWR
12-4-63 1245	Dry - no flow										DWR
1-13-64 1025	5.66 0.25	7.5	6.2 27				<25		10.0	85	DWR
Clear; first flow since 6-5-63											
2-10-64 0930	Dry - no flow										DWR
3-5-64 1420	Dry - no flow										DWR
4-1-64 0800	Dry - no flow										DWR
5-6-64 1115	Dry - no flow										DWR
6-3-64 1220	Dry - no flow										DWR
7-13-64 0930	Dry - no flow										DWR
8-5-64 1420	Dry - no flow										DWR
9-14-64 1040	Dry - no flow										DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT WHITTIER NARROWS						MISSION CREEK					49A						
10- 3-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
11- 8-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
12- 4-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
1-13-64	47	7.5	1623	208 10.38 53	46 3.78 19	117 5.09 26	7 0.18 1	0	356 5.83 30	535 11.14 57	88 2.48 13	1.5 0.02	0.6	0.46	20	1225 1199	709
2-10-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
3- 5-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
4- 4-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5- 6-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				RIO HONDO				49B			
ABOVE SPREADING GROUNDS											
10-3-63 0845 Clear	-- 1 est.	8.0	620 50	13	1.4		< 25		8.0	89	DWR
11-8-63 0900 Clear; vegetation in streambed	-- 5 est.	8.2	620 230	17	1.3		< 25		7.6	74	DWR
12-4-63 1315 Clear; gage buried in mud	-- 120 est.	7.8	23 62	1.75							
1-13-64 1133 Clear	-- 90 est.	8.0	2.3 < 0.45	0.44	0.06		< 25		10.0	99	DWR
2-10-64 1005 Clear; detergent odor; mud in channel	-- 38 est.	7.5	23 6.2	2.5	0.22		< 25		11.2	105	DWR
3-5-64 1600 Clear; small particles of vegetation and silt throughout water	-- 95 est.	7.6	23 21				< 25		9.2	91	DWR
4-4-64 0135 Clear; some foam and vegetation in water	-- 200 est.	8.0	130 130	0.42	0.10		< 25		9.8	92	DWR
5-6-64 1150 Clear; some foam	-- 60 est.	8.0	6.2 230	18	1.70		< 25		14.4	144	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																		
ABOVE SPREADING GROUNDS						RIO HONDO					49B							
	70	8.0	1164	71	23	141	13	0	260	156	132	36	1.2	0.47	32	702		272
10- 3-63				3.54	1.89	6.13	0.33		4.26	3.25	3.72	0.58						
				30	16	52	3		36	28	31	5					733	
	58	6.9	887	49	16	103	13	0	200	105	88	19	1.4	0.44	25	510		189
11- 8-63				2.45	1.32	4.48	0.33		3.28	2.19	2.48	0.31						
				29	15	52	4		40	27	30	4					518	
	68	7.7	1042	71	32	106	6	0	156	271	88	7.5	0.7	0.14	14	680		309
12- 4-63				3.54	2.63	4.61	0.15		2.56	5.64	2.48	0.12						
				32	24	42	1		24	52	23	1					673	
	60	8.3	1030	80	30	105	5	14	134	284	86	2.0	0.6	0.14	12	680		323
1-13-64				3.99	2.47	4.57	0.13	0.47	2.20	5.91	2.43	0.03						
				36	22	41	1	4	20	54	22						685	
	55	7.5	1010	76	28	105	6	0	163	263	87	7.5	0.6	0.16	13	690		305
2-10-64				3.79	2.30	4.57	0.15		2.67	5.48	2.45	0.12						
				35	21	42	1		25	51	23	1					666	
	60	7.8	1024	80	32	103	5	0	159	286	90	3.0	0.6	0.12	12	720		331
3- 5-64				3.99	2.63	4.48	0.13		2.61	5.95	2.54	0.05						
				36	23	40	1		23	53	23						690	
	55	8.0	1011	96	24	98	5	0	161	286	87	3.0	0.6	0.18	14	700		338
4- 4-64				4.79	1.97	4.26	0.13		2.64	5.95	2.45	0.05						
				43	18	38	1		24	54	22						693	
	60	7.4	1019	45	21	129	12	0	232	119	108	40	1.6	0.62	27	655		199
5- 6-64				2.25	1.73	5.61	0.31		3.80	2.48	3.05	0.65						
				23	17	57	3		38	25	31	7					617	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				RIO HONDO 49B							
ABOVE SPREADING GROUNDS											
6-3-64 1240 Clear; low flow; much marine life;	-- 1 est.	8.0	62 130 insect larva	2.5	0.19		< 25		7.2	90	DWR
7-13-64 0940 Clear; some foam	-- 8 est.	7.6	240 240	29	0.9		< 25		8.0	89	DWR
8-5-64 1450 Yellowish tinge; very strong sewage odor; much marine life	-- Ponded	8.2	700 240				--		3.8	54	DWR
9-14-64 1100 Yellow color; foam	-- 0.25 est.	8.4	240 23				50		6.4	77	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				RIO HONDO							49B						
ABOVE SPREADING GROUNDS																	
6- 3-64	80	7.8	1005	85	26	100	6	0	204	238	87	2.2	0.7	0.27	15	688	319
				4.24	2.14	4.35	0.15		3.34	4.96	2.45	0.04					
				39	20	40	1		31	46	23					660	
7-13-64	70	7.2	991	45	25	116	14	0	227	151	92	10	1.7	0.47	31	638	216
				2.25	2.06	5.04	0.36		3.72	3.14	2.59	0.16					
				23	21	52	4		39	33	27	2				598	
8- 5-64	94	7.5	1617	110	36	190	19	0	339	310	182	1.8	1.2	0.52	31	1134	423
				5.49	2.96	8.26	0.49		5.56	6.45	5.13	0.03					
				32	17	48	3		32	38	30					1048	
9-14-64	78	8.5	1378	107	28	151	11	24	193	302	145	21	0.8	0.28	27	930	382
				5.34	2.30	6.57	0.28	0.80	3.16	6.29	4.09	0.34					
				37	16	45	2	5	22	43	28	2				912	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN GABRIEL RIVER			50				
AT WHITTIER NARROWS											
10-3-63 1045	Dry - no flow										DWR
11-8-63 0730	Dry - no flow										
12-4-63 1345 Clear; mostly Colorado River water	-- 125	8.2	240 130	0.54	0.12		<25		9.6	103	DWR
1-13-64 0950 Clear; mostly Colorado River water	-- 140	8.0	62				<25		11.6	107	DWR
2-10-64 0910	Dry - no flow										DWR
3-5-64 1505	Dry - no flow										DWR
4-4-64 0050	Dry - no flow										DWR
5-6-64 1055 Clear	-- 151	7.8	240 240				25		9.4	88	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT WHITTIER NARROWS								SAN GABRIEL RIVER			50						
10- 3-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
11- 8-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
12- 4-64	68	8.3	1056	66 3.29 30	37 3.04 28	105 4.57 41	5 0.13 1	10 0.33 3	154 2.52 22	283 5.89 52	89 2.51 22	2.0 0.03	0.6	0.10	12	685 685	317
1-14-64	54	8.4	1034	82 4.09 36	30 2.47 22	105 4.57 41	5 0.13 1	19 0.63 6	122 2.00 18	287 5.98 54	87 2.45 22	2.0 0.03	0.6	0.14	11	685 685	327
2-11-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
3- 5-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
4- 4-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5- 6-64	56	8.0	1012	85 4.24 39	28 2.30 21	98 4.26 39	5 0.13 1	0	163 2.67 24	284 5.91 54	85 2.40 22	1.5 0.02	0.6	0.19	11	730 678	307

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN GABRIEL RIVER				50			
AT WHITTIER NARROWS											
6-3-64 0825	Dry - no flow										DWR
7-13-64 0825	Dry - no flow										DWR
8-5-64 1405	Dry - no flow										DWR
9-14-64 1030	Dry - no flow										DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number: SAN GABRIEL RIVER AT WHITTIER NARROWS 50																	
6- 3-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
7-13-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
8- 5-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
9-14-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN GABRIEL RIVER			50D				
AT AZUSA POWERHOUSE											
10-3-63	--	8.0	0.6	0.0	0.06		< 25		9.0	100	DWR
1145	80		0.6								
Slightly turbid; some foam											
11-7-63	--	8.3	< 0.45				55		10.4	103	DWR
1410	80		< 0.45								
Very turbid from storm runoff											
12-4-63	--	7.8	0.6	0.06	0.02		< 25		9.4	86	DWR
1005	37		2.3								
Small particles of vegetation throughout water											
1-13-64	--	8.0	0.6				< 25		12.0	103	DWR
1235	10		0.6								
Clear											
2-10-64	--	7.8	0.6				< 25		9.8	84	DWR
1135	37		< 0.45								
Clear											
3-5-64	--	7.8	< 0.45				< 25		8.8	78	DWR
1330	37		< 0.45								
Clear											
4-4-64	--	8.0	0.6				50		11.8	117	DWR
0405	80		23								
Milky hue; high flow											
5-6-64	--	7.6	0.6				< 25		10.4	100	DWR
1010	80		0.6								
Clear											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT AZUSA POWERHOUSE						SAN GABRIEL RIVER					50D						
10- 3-63	70	7.9	430	-- -- --	-- -- --	14 0.61 12	--	0	237 3.88 77	--	6 0.17 3	--	--	0.11	--		200
11- 7-63	60	8.0	456	63 3.14 60	16 1.32 25	14 0.61 12	5 0.13 3	0	278 4.56 86	26 0.54 10	7 0.20 4	1.5 0.02	0.4	0.12	19	270 289	223
12- 4-63	53	7.8	443	55 2.74 56	18 1.48 30	14 0.61 12	4 0.10 2	0	256 4.20 84	28 0.58 12	6 0.17 3	2.0 0.03 1	0.4	0.10	22	270 275	211
1-13-64	48	8.3	443	60 2.99 59	15 1.23 24	18 0.78 15	4 0.10 2	12 0.40 8	239 3.92 77	30 0.62 12	5 0.14 3	0.5 0.01	0.5	0.12	16	245 279	211
2-10-64	48	8.0	412	52 2.59 55	17 1.40 30	15 0.65 14	4 0.10 2	0	244 4.00 82	31 0.65 13	6 0.17 3	2.5 0.04 1	0.5	0.08	14	270 262	200
3- 5-64	51	8.0	418	58 2.89 59	16 1.32 27	13 0.57 12	4 0.10 2	0	254 4.16 84	31 0.65 13	5 0.14 3	1.5 0.02	0.5	0.10	16	240 270	211
4- 4-64	52	8.0	366	49 2.45 59	14 1.15 28	11 0.48 12	3 0.08 2	0	215 3.52 84	24 0.50 12	5 0.14 3	2.5 0.04 1	0.4	0.30	19	225 234	180
5- 6-64	56	7.8	365	47 2.35 59	14 1.15 29	9 0.39 10	3 0.08 2	0	210 3.44 84	28 0.58 14	3 0.08 2	0.5 0.01	0.5	0.10	12	250 220	175

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN GABRIEL RIVER			50D				
AT AZUSA POWERHOUSE											
6-3-64 1115 Clear; little foam	-- 60 est.	7.6	0.6 0.45	0.0	0.02		<25		11.0	107	DWR
7-13-64 1000 Clear; little foam	-- 60	7.4	2.3 0.45	0.0	0.06		<25		9.0	89	DWR
8-5-64 1325 Clear	-- 60	7.6	2.3 0.6				--		9.4	93	DWR
9-14-64 0945 Clear	-- 60	7.8	0.45 13				<25		8.8	83	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT AZUSA POWERHOUSE						SAN GABRIEL RIVER					50D						
6- 3-64	58	7.8	365	53	12	10	3	0	207	27	5	1.2	0.5	0.11	7	216	182
				2.64	0.99	0.43	0.08		3.39	0.56	0.14	0.02					
				64	24	10	2		82	14	3					221	
7-13-64	62	7.5	367	49	13	10	3	0	208	26	5	2	0.4	0.09	11	224	176
				2.45	1.07	0.43	0.08		3.41	0.54	0.14	0.03					
				61	27	11	2		83	13	3	1				222	
8- 5-64	68	8.0	376	51	12	10	4	0	211	25	5	1.5	0.5	0.12	10	229	177
				2.54	0.99	0.43	0.10		3.46	0.52	0.14	0.02					
				63	24	11	2		84	13	3					223	
9-14-64	72	7.9	374	47	14	10	4	0	206	28	4	2	0.4	0.09	11	223	175
				2.35	1.15	0.43	0.10		3.38	0.58	0.11	0.03					
				58	29	11	2		82	14	3	1				222	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				VENTURA RIVER			61				
NEAR VENTURA											
10-8-63 0830 Scum and vegetation on surface; small fish observed	6.28 0.1	7.9	43 23	0.00	0.00		< 25		11.4	126	DWR
11-14-63 1604 Clear; much algae	6.26 0.1	7.4	62 23				< 25		6.2	63	DWR
12-4-63 1910 Very clear	6.46 1.1	7.1	62 62				< 25		12.3	108	DWR
1-3-64 1400 Clear; much vegetation in stream	6.25 0.2	7.2	62 50				< 25		1.8	17	DWR
2-5-64 1135 Clear; fish and insects observed	6.33 0.5	7.4	13 6				< 25		12.0	114	DWR
3-4-64 1100 Clear; scum on surface; green algae on bottom	6.24 0.2	7.2	23 13				< 25		7.8	74	DWR
4-2-64 1250 Clear; small fish observed	6.29 0.8	7.4	43 62				< 25		8.6	88	DWR
5-5-64 1207 Clear; fish and insects observed	6.27 1.	7.4	43 8.2				< 25		8.6	89	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR VENTURA — VENTURA RIVER — 61																	
10- 3-63	69	7.4	1234	--	--	72 3.13	--	0	356 5.83	--	64 1.80	--	--	0.58	--		530
11-14-63	62	7.3	1242	162 8.08 53	41 3.37 22	83 3.61 24	2 0.05	0	381 6.24 42	317 6.60 44	75 2.12 14	0.5 0.01	0.7	0.62	30	905 899	573
12- 3-63	52	7.5	1297	155 7.73 52	44 3.62 25	76 3.30 22	3 0.08 1	0	354 5.80 40	325 6.77 46	70 1.97 13	6.5 0.10 1	0.7	0.52	31	870 886	568
1- 3-64	56	7.7	1282	164 8.18 54	41 3.37 22	78 3.39 23	3 0.08 1	0	368 6.03 40	334 6.95 46	70 1.97 13	0.5 0.01	0.7	0.58	23	940 896	578
2- 3-64	56	7.5	1225	157 7.83 53	41 3.37 23	80 3.48 24	3 0.08 1	0	356 5.83 40	327 6.81 46	70 1.97 13	2.9 0.05	0.8	0.52	19	890 876	560
3- 4-64	56	7.4	1253	160 7.98 53	45 3.70 24	78 3.39 22	2 0.05	0	378 6.20 41	326 6.79 45	73 2.06 14	2.5 0.04	0.7	0.52	20	950 894	584
4- 2-64	62	7.7	1198	150 7.49 52	43 3.54 25	75 3.26 23	3 0.08 1	0	359 5.88 41	310 6.45 45	71 2.00 14	2.0 0.03	0.7	0.20	25	860 856	552
5- 5-64	58	7.8	1159	143 7.14 53	41 3.37 25	69 3.00 22	2 0.05	0	334 5.47 40	304 6.33 46	67 1.89 14	1.0 0.02	0.7	0.62	19	905 812	526

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				VENTURA RIVER 61							
NEAR VENTURA											
6-2-64 1225 Clear; algae on bottom and surface; small fish observed	6.30 0.1	7.2	240 23				< 25		7.6	81	DWR
7-2-64 1540 Slightly turbid; green algae; small fish and insects observed.	6.18 Ponded	7.4	23 13				< 25		9.4	109	DWR
8-4-64 1315 Clear	5.98 Ponded	7.2	62 700				--		8.2	94	DWR
9-1-64 1510 Clear; green algae on bottom and surface; floating dead fish	6.02 Ponded	7.3	23				< 25		12.2	152	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR VENTURA				VENTURA RIVER 61													
6- 2-64	66	7.3	1234	157 7.83 53	42 3.45 23	77 3.35 23	3 0.08 1	0	378 6.20 43	300 6.25 43	74 2.09 14	1.5 0.02	0.8	0.66	23	934 865	564
7- 2-64	74	7.6	1225	146 7.29 51	41 3.37 24	82 3.57 25	3 0.08 1	0	358 5.87 41	302 6.29 44	78 2.20 15	2 0.03	0.7	0.59	24	898 855	533
8- 4-64	73	7.7	1268	152 7.58 52	40 3.29 22	86 3.74 25	3 0.08 1	0	364 5.97 40	306 6.37 43	87 2.45 17	2.9 0.05	0.7	0.68	27	964 884	544
9- 1-64	72	7.6	1302	160 7.98 53	42 3.45 23	80 3.48 23	3 0.08 1	0	366 6.00 40	307 6.39 43	90 2.54 17	1 0.02	0.8	0.70	30	940 894	572

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER			69				
AQUEDUCT AT LA VERNE											
10-1-63	--	--	--				0.6		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm; Alkalinity ($CaCO_3$) = 109 ppm											
11-1-63	--	--	--				0.7		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm; Alkalinity ($CaCO_3$) = 111 ppm											
12-1-63	--	--	--				0.8		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm; Alkalinity ($CaCO_3$) = 114 ppm											
1-1-64	--	--	--				0.8		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm; Color = 6; Alkalinity ($CaCO_3$) = 116 ppm; Nitrite = 0.001 ppm											
2-1-64	--	--	--				0.9		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm; Alkalinity ($CaCO_3$) = 120 ppm											
3-1-64	--	--	--				1.0		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm											
4-1-64	--	--	--				1.0		--	--	MWD
Monthly composite sample; free CO_2 = 1 ppm											
5-1-64	--	--	--				1.4		--	--	MWD
Monthly composite sample; free CO_2 = 0											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AQUEDUCT AT LA VERNE				COLORADO RIVER								69					
10- 1-63	--	8.2	1050	80 3.99 37	29 2.38 22	96 4.17 39	5 0.13 1	0	133 2.18 21	288 6.00 57	85 2.40 23	0.7 0.01	0.4	--	9	660 658	319
11- 1-63	--	8.2	1035	81 4.04 38	28 2.30 22	95 4.13 39	5 0.13 1	0	135 2.21 21	290 6.04 57	84 2.37 22	0.9 0.01	0.4	--	10	661 661	317
12- 1-63	60	8.3	1035	81 4.04 38	29 2.38 22	94 4.09 38	5 0.13 1	0	139 2.28 22	286 5.95 56	82 2.31 22	0.6 0.01	0.4	--	9	656 655	321
1- 1-64	57	8.4	1045	84 4.19 39	28 2.30 21	96 4.17 39	5 0.13 1	1 0.03	142 2.33 22	287 5.98 55	87 2.45 23	1.1 0.02	0.4	0.11	9	670 668	325
2- 1-64	55	8.4	1055	84 4.19 39	28 2.30 21	95 4.13 38	5 0.13 1	1 0.03	144 2.36 22	288 6.00 55	86 2.43 22	1.1 0.02	0.4	--	9	670 668	325
3- 1-64	56	8.4	1050	84 4.19 39	28 2.30 21	95 4.13 38	5 0.13 1	1 0.03	145 2.38 22	288 6.00 56	84 2.37 22	1.0 0.02	0.4	--	9	668 667	325
4- 1-64	--	8.4	1040	85 4.24 39	28 2.30 21	94 4.09 38	5 0.13 1	1 0.03	145 2.38 22	283 5.89 55	84 2.37 22	1.4 0.02	0.4	--	10	664 663	327
5- 1-64	--	8.5	1060	86 4.29 40	28 2.30 21	94 4.09 38	4 0.10 1	1 0.03	145 2.38 22	286 5.95 55	86 2.43 23	0.7 0.01	0.4	--	--	668 657	330

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER			69				
AQUEDUCT AT LA VERNE											
6-1-64 Monthly composite sample; Color = 8	--	--	--				1.0		--	--	MWD
7-1-64 Monthly composite sample; free CO_2 = 1 ppm	--	--	--				0.9		--	--	MWD
8-1-64 Monthly composite sample; free CO_2 = 2 ppm	--	--	--				1.4		--	--	MWD
9-1-64 Monthly composite sample; free CO_2 = 1 ppm	--	--	--				--		--	--	MWD

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AQUEDUCT AT LA VERNE				COLORADO RIVER							69						
6- 1-64	67	8.3	1070	86	28	94	5	1	143	287	87	1.3	0.4	0.11	10	671	330
				4.29	2.30	4.09	0.13	0.03	2.34	5.98	2.45	0.02					
				40	21	38	1		22	55	23					670	
7- 1-64	72	8.2	1080	85	29	97	5	0	140	292	92	1.0	0.4	--	10	681	331
				4.24	2.38	4.22	0.13		2.29	6.08	2.59	0.02					
				39	22	38	1		21	55	24					680	
8- 1-64	77	8.1	1090	83	29	100	5	0	135	294	94	0.6	0.4	--	10	683	326
				4.14	2.38	4.35	0.13		2.21	6.12	2.65	0.01					
				38	22	40	1		20	56	24					682	
9- 1-64	76	8.2	1090	83	29	101	5	0	134	300	94	0.6	0.4	--	10	690	326
				4.14	2.38	4.39	0.13		2.20	6.25	2.65	0.01					
				38	22	40	1		20	56	24					689	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES AQUEDUCT			70				
NEAR SAN FERNANDO											
10-22-63	--	8.12	9.2			0.01	7		8.6	90	LADWP
--	495										
5 Day BOD = 1.6 ppm; color = 15; alkalinity = 119 ppm; Kjeldahl nitrogen = 0.49 ppm											
11-19-63	--	8.08	--			0.01	7		9.6	91	LADWP
--	495										
5 Day BOD = 0.8 ppm; color = 5; alkalinity = 116 ppm; Kjeldahl nitrogen = 0.41 ppm											
12-17-63	--	--	--			0.00	9		11.5	99	LADWP
--	495										
5 Day BOD = 0.6 ppm; color = 5; alkalinity = 120 ppm; Kjeldahl nitrogen = 0.32 ppm											
1-21-64	--	7.92	0.0		0.02		6		12.2	99	LADWP
--	495										
5 Day BOD = 1.1 ppm; color = 5; alkalinity = 123 ppm; nitrite (NO_2) = 0.00 ppm; organic nitrogen = 0.40 ppm; arsenic = 0.005 ppm											
2-25-64	--	7.78	--			0.01	--		11.8	98	LADWP
--	409.3										
5 Day BOD = 1.1 ppm; color = 5; alkalinity = 110 ppm; Kjeldahl nitrogen = 0.25 ppm											
3-17-64	--	8.40	0.05			0.01	--		11.6	97	LADWP
--	439										
5 Day BOD = 1.7 ppm; color = 5; alkalinity = 116 ppm; Kjeldahl nitrogen = 0.22 ppm; arsenic = 0.020 ppm											
4-21-64	--	8.46	0.09		<0.02		2		10.0	93	LADWP
--	495										
5 Day BOD = 1.3 ppm; color = 5; alkalinity = 116 ppm; Kjeldahl nitrogen = 0.28 ppm											
5-19-64	--	8.8	--				4		9.6	86	LADWP
--	--										
Color = 1; iron = 0.4 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PRO

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR SAN FERNANDO						LOS ANGELES AQUEDUCT 70											
10-22-63	64	--	281	21 1.05	4 0.33	27 1.17	4 0.10	--	--	21 0.44	12 0.34	0.6 0.01	0.5	0.33	27		69
11-19-63	56	--	299	22 1.10	5 0.41	28 1.22	4 0.10	--	--	20 0.42	13 0.37	0.6 0.01	0.5	0.38	20		76
12-17-63	48	8.5	--	22 1.10	5 0.41	32 1.39	4 0.10	--	--	30 0.62	13 0.37	0.9 0.01	0.5	0.45	20		76
1-21-64	44	8.4	329	25 1.25	6 0.49	30 1.30	4 0.10	--	--	29 0.60	15 0.42	0.7 0.01	0.6	--	21	86	87
2-25-64	45	8.2	306	22 1.10	6 0.49	33 1.43	4 0.10	--	--	24 0.50	17 0.48	0.4 0.01	0.6	0.45	18		80
3-17-64	46	8.1	306	22 1.10	7 0.58	32 1.39	4 0.10	--	--	17 0.35	20 0.56	0.2	0.6	0.47	18		84
4-21-64	54	8.4	332	25 1.25	6 0.49	35 1.52	4 0.10	--	--	28 0.58	16 0.45	0.2	0.6	0.44	20		87
5-19-64	51	8.4	334	23 1.15 35	7 0.58 18	34 1.48 45	4 0.10 3	0	118 1.93 67	21 0.44 15	17 0.48 17	1.0 0.02 1	0.4	--	21	86 186	87

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LOS ANGELES DRAINAGE PROVINCE (U)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LOS ANGELES AQUEDUCT			70				
NEAR SAN FERNANDO											
6-16-64 -- Color = 5	-- 495.2	8.4	--				4		8.8	92	LADWP
7-21-64 -- 5 day BOD = 1.5 ppm; color = 5; Alkalinity = 125 ppm; Arsenic = 0.008 ppm; Kjeldahl Nitrogen = 0.28 ppm	-- 495.5	8.28	--				1		9.4	108	LADWP
8-18-64 -- 5 day BOD = 0.9 ppm; color = 10; Alkalinity = 125 ppm; Arsenic = 0.007 ppm	-- 495.3	8.40	0.0				5		8.0	91	LADWP
9-22-64 -- 5 day BOD = 1.0 ppm; color = 15	-- 495.2	8.70	--			0.00	8		8.2	88	LADWP

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR SAN FERNANDO				LOS ANGELES AQUEDUCT 70													
6-16-64	64	8.5	351	25 1.25	6 0.49	37 1.61	4 0.10	--	--	26 0.54	15 0.42	0.6 0.01	0.6	--	22		87
7-21-64	73	8.6	341	26 1.30	6 0.49	35 1.52	4 0.10	--	--	26 0.54	14 0.39	0.2	0.6	0.50	22		90
8-18-64	72	8.5	341	24 1.20	7 0.58	36 1.57	4 0.10	--	--	24 0.50	16 0.45	0.8 0.01	0.6	0.42	18		89
9-22-64	67	8.5	359	25 1.25	8 0.66	39 1.70	5 0.13	--	--	26 0.54	17 0.48	0.6 0.01	0.6	0.60	21		96

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LAHONTAN DRAINAGE PROVINCE (W)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				MOJAVE RIVER 67							
NEAR VICTORVILLE											
10-4-63 1030 Clear	1.76 22	8.0	62 23				<25		7.2	80	DWR
11-6-63 1615 Clear; floating leaves, twigs and debris	2.11 30	8.0	1300 620				<25		7.4	75	DWR
12-5-63 1120 Clear	2.38 35	7.5	<4.5 <4.5				<25		8.6	78	DWR
1-14-64 1300 Clear	2.57 38	7.4	0.6 2.3				<25		9.4	81	DWR
1-30-64 1330											SBCFCD
2-6-64 1205 Clear; silt and sand flowing through water	2.55 31	7.5	2.3 23				<25		9.2	83	DWR
3-6-64 1225 Clear	2.59 34	7.3	6.2 1.3				<25		9.4	88	DWR
4-4-64 0610 Clear	2.54 26	7.4	6.2 <0.45				<25		9.6	84	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LAHONTAN DRAINAGE PROVINCE (W)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number						MOJAVE RIVER					67						
NEAR VICTORVILLE			67														
10- 4-63	69	7.8	516	--	--	50	--	0	210	--	34	--	--	0.13	--		156
						2.17			3.44		0.96						
11- 6-63	61	7.8	482	43	10	49	5	0	217	36	30	1.5	0.6	0.14	27	290	149
				2.15	0.82	2.13	0.13		3.56	0.75	0.85	0.02					
				41	16	41	2		69	14	16					309	
12- 5-63	52	7.6	481	38	13	46	4	0	207	36	30	2.5	0.5	0.10	25	270	144
				1.90	1.07	2.00	0.10		3.39	0.75	0.85	0.04					
				37	21	39	2		67	15	17	1				307	
1-14-64	48	7.9	432	39	9	45	3	0	195	38	27	2.5	0.5	0.10	23	280	135
				1.95	0.74	1.96	0.08		3.20	0.79	0.76	0.04					
				41	16	41	2		67	16	16	1				283	
1-30-64	--	8.1	452	43	9	45	3	0	207	36	29	3.3	0.7	0.11	--	281	145
				2.15	0.74	1.96	0.08		3.39	0.75	0.82	0.05					
				44	15	40	2		68	15	16	1				271	
2- 6-64	52	7.8	450	40	11	43	5	0	200	41	27	3.0	0.6	0.10	23	285	145
				2.00	0.90	1.87	0.13		3.28	0.85	0.76	0.05					
				41	18	38	3		66	17	15	1				292	
3- 6-64	55	7.7	440	43	8	43	2	0	198	35	25	4.8	0.5	0.08	24	270	141
				2.15	0.66	1.87	0.05		3.25	0.73	0.71	0.08					
				45	14	40	1		68	15	15	2				283	
4- 4-64	49	7.6	449	45	8	42	2	0	196	38	27	2.0	0.4	0.10	23	260	146
				2.25	0.66	1.83	0.05		3.21	0.79	0.76	0.03					
				47	14	38	1		67	16	16	1				284	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LAHONTAN DRAINAGE PROVINCE (W)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				MOJAVE RIVER			67				
NEAR VICTORVILLE											
5-7-64 1630 Clear	2.49 24	7.4	13 2.3				<25		7.4	80	DWR
6-4-64 1040 Clear; small fish observed	2.35 18	7.4	23 6.2				<25		8.6	91	DWR
7-15-64 1120 Clear	2.26 8	7.4	130 23				<25		9.4	106	DWR
8-7-64 1110 Clear; much vegetation	2.30 21.4	7.4	700+ 700+				--		9.0	94	DWR
9-3-64 1440 Clear	2.45 11	7.3	700 700				<25		9.2	105	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LAHONTAN DRAINAGE PROVINCE (W)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

LAHONTAN DRAINAGE PROVINCE (W)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number						MOJAVE RIVER					67						
NEAR VICTORVILLE			67														
	67	7.9	464	42	10	43	2	0	198	40	26	1.2	0.6	0.12	24	297	146
5- 7-64				2.10	0.82	1.87	0.05		3.25	0.83	0.73	0.02					
				43	17	39	1		67	17	15					286	
	65	7.7	473	42	12	43	3	0	205	41	28	2.2	0.5	0.13	27	298	155
6- 4-64				2.10	0.99	1.87	0.08		3.36	0.85	0.79	0.04					
				42	20	37	2		67	17	16	1				300	
	71	7.4	503	46	9	49	3	0	210	46	33	2	0.6	0.15	28	321	152
7-15-64				2.30	0.74	2.13	0.08		3.44	0.96	0.93	0.03					
				44	14	41	2		64	18	17	1				320	
	76	7.4	497	45	9	48	3	0	210	43	32	1	0.6	0.15	27	326	150
8- 7-64				2.25	0.74	2.09	0.08		3.44	0.90	0.90	0.02					
				44	14	41	2		65	17	17					312	
	73	7.8	516	38	14	50	3	0	205	47	34	0.9	0.7	0.14	--	305	153
9- 3-64				1.90	1.15	2.17	0.08		3.36	0.98	0.96	0.01					
				36	22	41	2		63	18	18					288	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LAHONTAN DRAINAGE PROVINCE (W)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				MOJAVE RIVER			67A				
AT THE FORKS											
10-4-63 1145 Clear; small fish and insects	None 15 est.	8.0	1.3 2.3				<25		9.6	107	DWR
11-6-63 1415 Clear	None 20 est.	8.2	23 50				<25		8.7	86	DWR
12-5-63 1015 Very clear	None 30 est.	7.6	2.3 2.3				<25		10.2	83	DWR
1-14-64 1410 Clear	None 20 est.	7.6	2.3 .60				<25		11.0	103	DWR
2-6-64 1040 Clear	None 22 est.	7.8	.60 .92				<25		10.4	110	DWR
3-6-64 1115 Clear; snowing at time of sampling	None 30 est.	7.3	2.3 .60				<25		9.8	79	DWR
4-4-64 0800 Yellowish tinge; foam	None 4 est.	7.4	62 6.2	0.08	0.04		<25		11.2	91	DWR
5-7-64 1810 Clear; many trout observed	None 40 est.	7.6	1.3 6.2				<25		8.6	84	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LAHONTAN DRAINAGE PROVINCE (W)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LAHONTAN DRAINAGE PROVINCE (W)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT THE FORKS						MOJAVE RIVER						67A					
	70	7.9	444	--	--	59	--	0	151	--	13	--	--	0.23	--		95
10- 4-63						2.57			2.47		0.37						
	59	7.6	379	24	6	51	3	0	146	49	12	0.5	3.0	0.16	24	225	85
11- 6-63				1.20	0.49	2.22	0.08		2.39	1.02	0.34	0.01					
				30	12	56	2		64	27	9					244	
	44	7.5	289	17	7	36	2	0	122	33	10	0.5	2.0	0.10	32	160	72
12- 5-63				0.85	0.58	1.57	0.05		2.00	0.69	0.28	0.01					
				28	19	51	2		67	23	9					200	
	48	8.0	290	23	5	36	1	0	127	33	11	1.0	2.2	0.08	22	200	78
1-14-64				1.15	0.41	1.57	0.03		2.08	0.69	0.31	0.02					
				36	13	50	1		67	22	10	1				197	
	42	7.9	245	20	5	30	1	0	117	23	10	0.1	2.0	0.08	21	150	71
2- 6-64				1.00	0.41	1.30	0.03		1.92	0.48	0.28						
				36	15	47	1		72	18	10					170	
	43	7.7	260	22	4	28	2	0	116	21	9	2.0	1.6	0.04	20	167	72
3- 6-64				1.10	0.33	1.22	0.05		1.90	0.44	0.25	0.03					
				41	12	45	2		73	17	10	1				167	
	44	7.6	135	14	2	12	1	0	63	8	7	0.5	0.5	0.12	19	85	43
4- 4-64				0.70	0.16	0.52	0.03		1.03	0.17	0.20	0.01					
				50	11	37	2		73	12	14	1				95	
	58	7.6	175	17	3	15	1	0	82	9	6	0.6	0.8	0.08	19	127	55
5- 7-64				0.85	0.25	0.65	0.03		1.34	0.19	0.17	0.01					
				48	14	37	2		78	11	10	1				112	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
LAHONTAN DRAINAGE PROVINCE (W)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number			MOJAVE RIVER				67A				
AT THE FORKS											
8-4-64 0930 Clear; large fish and trout observed	None 30 est.	7.4	62 23				<25		9.6	98	DWR
7-15-64 1220 Clear; swimmers upstream	None 4 est.	7.4	23 13				<25		6.8	77	DWR
8-7-64 0930 Clear; much green algae on bottom and surface	None 1 est.	--	240 62				--		7.8	96	DWR
9-3-64 1325 Clear; oily film on surface; Arsenic = 0.0 ppm	None 1.5 est.	7.3	240 62				<25		8.4	97	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LAHONTAN DRAINAGE PROVINCE (W)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LAHONTAN DRAINAGE PROVINCE (W)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT THE FORKS				MOJAVE RIVER								67A					
6- 4-64	62	7.8	226	20 1.00 42	4 0.33 14	23 1.00 42	2 0.05 2	0	106 1.74 75	17 0.35 15	7 0.20 9	1.8 0.03 1	1.2	0.07	22	147 150	67
7-15-64	71	7.3	349	24 1.20 33	6 0.49 13	44 1.91 52	3 0.08 2	0	139 2.28 63	48 1.00 27	12 0.34 9	1 0.02 1	2.0	0.15	19	230 227	85
8- 7-64	80	7.5	369	27 1.35 35	5 0.41 11	46 2.00 52	3 0.08 2	0	167 2.74 71	35 0.73 19	13 0.37 10	1 0.02 1	2.4	0.17	26	255 241	88
9- 3-64	74	7.5	463	33 1.65 35	7 0.58 12	55 2.39 51	3 0.08 2	0	171 2.80 60	70 1.46 31	15 0.42 9	1 0.02	2.8	0.19	25	297 296	112

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER			54				
NEAR TOPOCK, ARIZONA											
5-18-64 1720 Clear; large fish observed	18.19 9890	7.8	5 ◁ 0.45				◁ 25		9.2	97	DWR
9-11-64 1310 Clear; large fish observed; arsenic = 0.0 ppm	19.28 13520	8.1	0.60 ◁ 0.45				◁ 25		9.0	98	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR TOPOCK, ARIZONA						COLORADO RIVER					54						
	65	7.6	1048	88	31	100	4	0	156	292	93	1.4	0.5	0.16	10	713	347
5-18-64				4.39	2.55	4.35	0.10		2.56	6.08	2.62	0.02					
				39	22	38	1		23	54	23					697	
	68	7.8	1079	88	29	100	5	0	151	294	94	2	0.5	0.15	11	726	339
9-11-64				4.39	2.38	4.35	0.13		2.47	6.12	2.65	0.03					
				39	21	39	1		22	54	24					698	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER 55							
BELOW PARKER DAM											
5-19-64 0815 Clear	18.86 4450	7.8	6.2 62				< 25		8.8	95	DWR
9-9-64 1705 Clear	20.9 13200	8.3	2.3 2.3				< 25		7.2	86	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
BELOW PARKER DAM				COLORADO RIVER 55													
	67	8.2	1031	87	31	98	5	0	156	289	90	1.6	0.5	0.13	10	711	345
5-19-64				4.34	2.55	4.26	0.13		2.56	6.02	2.54	0.03					
				38	23	38	1		23	54	23					689	
	77	7.7	1079	85	30	98	5	0	148	297	94	1	0.5	0.15	11	728	336
9- 9-64				4.24	2.47	4.26	0.13		2.43	6.18	2.65	0.02					
				38	22	38	1		22	55	23					694	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER			56				
AT YUMA, ARIZONA											
5-12-64 1450 Clear	114.03 1040	7.6	24 24				<25		8.8	108	DWR
7-7-64 1215 Turbid	113.77 900 est.	7.4	24 240				100		8.8	117	DWR
9-8-64 1715 Clear	113.88 904	8.3	6.2 6.2				35		8.0	107	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT YUMA, ARIZONA				COLORADO RIVER 56													
5-12-64	80	7.7	2694	160 7.98 28	63 5.18 18	360 15.65 54	7 0.18 1	0	234 3.84 13	484 10.08 35	529 14.92 52	2.4 0.04	1.0	0.52	18	1814 1740	659
7- 7-64	87	7.8	3920	206 10.28 25	91 7.48 18	540 23.48 57	8 0.20	0	256 4.20 10	597 12.43 30	888 25.04 60	25 0.40 1	0.9	0.68	19	2732 2501	889
9- 8-64	88	7.5	4184	208 10.38 24	89 7.32 17	582 25.31 59	8 0.20	0	250 4.10 9	613 12.76 29	943 26.59 61	12 0.19	1.1	0.88	18	2883 2598	886

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number ALL AMERICAN CANAL 56A											
NEAR PILOT KNOB											
5-13-64 0830 Clear	17.22 5800 est.	7.8	2.3 24				<25		8.0	93	DWR
7-7-64 1245 Slightly turbid	17.43 8900	7.6	6.2 13				37		8.0	105	DWR
9-8-64 1645 Clear; arsenic = 0.0 ppm	17.30 6670	8.5	2400 2400				32		9.4	118	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR PILOT KNOB						ALL AMERICAN CANAL					56A						
5-13-64	75	8.0	1219	93 4.64 35	34 2.80 21	130 5.65 43	5 0.13 1	0	171 2.80 21	326 6.79 52	125 3.53 27	1.5 0.02	0.5	0.16	11	828 810	372
7- 7-64	86	8.0	1177	90 4.49 35	33 2.71 21	125 5.44 43	5 0.13 1	0	162 2.66 21	323 6.72 53	115 3.24 26	3 0.05	0.5	0.14	13	810 787	360
9- 8-64	82	7.7	1283	92 4.59 34	33 2.71 20	139 6.04 45	5 0.13 1	0	164 2.69 20	331 6.89 52	133 3.75 28	2 0.03	0.6	0.21	13	872 829	365

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER 565							
BELOW MORELOS DAM											
5-11-66 1230 Clear; some vegetation in water	99.24 23.5	7.6	6.2 24				<25		9.6	120	DWR
7-7-66 1055 Slightly turbid; large fish observed	100.10 6, est.	7.4	68 240				<25		6.4	92	DWR
9-8-66 1605 Greenish tinge; large fish observed; arsenic = 0.0 ppm	99.13 15.5	8.2	6.60 24				<25		9.7	123	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents percent / reactance / value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																		
BELOW MORELOS DAM						COLORADO RIVER					56B							
5-12-64	82	7.5	2011	138	50	246	6	0	229	427	319	1.8	0.7	0.33	16	1364		550
				6.89	4.11	10.70	0.15		3.75	8.89	9.00	0.03						
				32	19	49	1		17	41	42						1317	
7- 7-64	84	7.7	2187	143	54	269	6	0	232	451	367	2	0.7	0.33	16	1518		579
				7.14	4.44	11.70	0.15		3.80	9.39	10.35	0.03						
				30	19	50	1		16	40	44						1423	
9- 9-64	90	7.6	2354	146	55	293	7	0	231	463	398	19	0.8	0.42	19	1580		591
				7.29	4.52	12.74	0.18		3.79	9.64	11.22	0.31						
				29	18	52	1		15	39	45	1					1515	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				COLORADO RIVER				56C			
NEAR BLYTHE											
9-20-64 0900 Clear; swimmers in water	None 10300	7.8	240 6.2				<25		9.4	108	DWR
9-9-64 1435 Clear	None 10600	7.8	700 --				<25		8.4	112	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR BLYTHE						COLORADO RIVER					56C						
5-20-64	73	8.2	1063	89	32	101	5	0	157	297	92	1.4	0.5	0.13	11	724	354
				4.44	2.63	4.39	0.13		2.57	6.18	2.59	0.02					
				38	23	38	1		23	54	23					706	
9- 9-64	88	7.8	1118	89	30	108	5	0	151	306	99	1	0.6	0.16	12	766	346
				4.44	2.47	4.70	0.13		2.47	6.37	2.79	0.02					
				38	21	40	1		21	55	24					725	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number											
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	
	--	--	--						--	--	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT AQUEDUCT INTAKE						COLORADO RIVER					56D						
10- 1-63	79	--	1025	77	28	92	5	4	127	276	82	1.0	0.3	--	10	639	307
				3.84	2.30	4.00	0.13	0.13	2.08	5.75	2.31	0.02					
				37	22	39	1	1	20	56	22					638	
11- 5-63	71	8.3	1025	80	28	94	5	0	143	277	81	1.0	0.4	--	10	647	315
				3.99	2.30	4.09	0.13		2.34	5.77	2.28	0.02					
				38	22	39	1		22	55	22					647	
12- 3-63	60	--	1020	83	28	93	5	0	149	279	82	1.3	0.4	--	10	656	322
				4.14	2.30	4.04	0.13		2.44	5.81	2.31	0.02					
				39	22	38	1		23	55	22					655	
1- 7-64	51	8.2	1045	83	29	94	5	0	149	283	85	1.6	0.4	--	10	665	326
				4.14	2.38	4.09	0.13		2.44	5.89	2.40	0.03					
				39	22	38	1		23	55	22					664	
3- 3-64	50	--	1040	87	27	90	5	1	150	280	81	1.7	0.4	--	10	658	328
				4.34	2.22	3.91	0.13	0.03	2.46	5.83	2.28	0.03					
				41	21	37	1		23	55	21					657	
4- 7-64	61	8.3	1050	87	28	88	5	1	149	279	80	1.2	0.4	--	--	654	332
				4.34	2.30	3.83	0.13	0.03	2.44	5.81	2.26	0.02					
				41	22	36	1		23	55	21					643	
5- 5-64	66	8.4	1050	87	28	93	5	0	146	286	88	1.3	0.4	--	--	671	332
				4.34	2.30	4.04	0.13		2.39	5.95	2.48	0.02					
				40	21	37	1		22	55	23					660	
6- 2-64	77	8.4	1100	88	29	96	5	0	150	293	88	1.2	0.4	--	10	686	339
				4.39	2.38	4.17	0.13		2.46	6.10	2.48	0.02					
				40	21	38	1		22	55	22					684	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number: COLORADO RIVER 56D											
AT AQUEDUCT INTAKE											
7-7-64	--	--	--				1.0		--	--	MWD
Alkalinity ($CaCO_3$) = 112 ppm; free CO_2 = 1.0 ppm											
8-4-64	--	--	--				0.5		--	--	MWD
Alkalinity ($CaCO_3$) = 105 ppm; free CO_2 = 1.0 ppm											
9-1-64	--	--	--				0.7		--	--	MWD
Alkalinity ($CaCO_3$) = 106 ppm; free CO_2 = 0.0 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT AQUEDUCT INTAKE						COLORADO RIVER					56D						
	81	8.3	1100	87	29	96	6	4	129	294	95	0.9	0.4	--	12	688	336
7- 7-64				4.34	2.38	4.17	0.15	0.13	2.11	6.12	2.68	0.01					
				39	22	38	1	1	19	55	24					688	
	84	--	1100	82	30	101	6	0	128	302	96	0.6	0.4	--	11	693	328
8- 4-64				4.09	2.47	4.39	0.15		2.10	6.29	2.71	0.01					
				37	22	40	1		19	57	24					692	
	82	8.6	1090	79	30	100	6	4	122	294	96	0.3	0.4	--	10	680	321
9- 1-64				3.94	2.47	4.35	0.15	0.13	2.00	6.12	2.71						
				36	23	40	1	1	18	56	25					680	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				NEW RIVER				57			
AT INTERNATIONAL BOUNDARY											
11-5-63 1025	960.57 208	8.6	24,000 24,000	2.3	0.6				8.0	89	DWR
Turbid, sewage odor; small fish observed											
1-8-64 1030	959.03 108	8.0	24,000 7,000			1.8	50		0.4	4	DWR
Turbid, large amount of raw sewage; sewage odor											
3-11-64 1330	959.29 174	8.2	6,200 1,200				280		4.4	46	DWR
Raw sewage in stream; black bottom; white salts deposited on banks											
5-11-64 1215	959.18 158	8.2	2,400 24,000				200		6.2	70	DWR
Turbid; raw sewage in stream											
7-7-64 1500	958.79 126	7.5	62,000 620,000			1.8			7.3	68	DWR
Turbid; raw sewage in stream; sewage odor											
9-8-64 1310	959.00 166	7.6	62,000 240,000			2			7.4	86	DWR
Very turbid; much raw sewage in stream; arsenic = 0.0 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT INTERNATIONAL BOUNDARY				NEW RIVER 57													
11- 5-63	70	7.4	4120	148	99	580	22	0	229	543	930	21	0.7	0.78	24	2630	777
				7.39	8.14	25.22	0.56		3.75	11.31	26.23	0.34					
				18	20	61	1		9	27	63	1				2481	
1- 8-64	52	7.4	5464	209	109	875	40	0	295	674	1385	5.0	0.7	1.12	16	3630	970
				10.43	8.96	38.05	1.02		4.84	14.03	39.06	0.08					
				18	15	65	2		8	24	67					3460	
3-11-64	64	8.0	5288	214	104	874	4	0	325	670	1340	3.7	1.4	1.12	22	3500	962
				10.68	8.55	38.00	0.10		5.33	13.95	37.79	0.06					
				19	15	66			9	24	66					3394	
5-11-64	77	7.5	6090	208	130	1008	37	0	306	770	1579	1.2	0.8	1.45	20	4078	1054
				10.38	10.69	43.83	0.95		5.02	16.03	44.53	0.02					
				16	16	67	1		8	24	68					3906	
7- 7-64	92	7.4	7825	248	140	1320	69	0	228	765	2220	20	1.0	1.80	23	5287	1195
				12.38	11.51	57.39	1.76		3.74	15.93	62.60	0.32					
				15	14	69	2		5	19	76					4920	
9- 8-64	91	7.2	7813	262	143	1311	67	0	370	790	2200	12	0.9	1.80	22	5150	1242
				13.07	11.76	57.00	1.71		6.06	16.45	62.04	0.19					
				16	14	68	2		7	19	73					4992	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number NEW RIVER 58											
NEAR WESTMORLAND											
11-4-63 1145 Turbid	773.05 652	8.4	6200 24000				--		7.0	76	DWR
1-8-64 1410 Turbid	772.50 687	7.6	24000 62000				200		8.8	80	DWR
3-11-64 0945 Turbid	773.58 677	7.4	2400 2400				370		8.2	79	DWR
5-11-64 1530 Turbid	773.19 526	7.4	2400 2400				185		6.6	78	DWR
7-6-64 1419 Turbid	772.92 442	7.4	2400 2400				200		6.6	83	DWR
9-7-64 1945 Turbid; arsenic = 0.0 ppm	773.37 515	7.4	2400 2400				200		8.2	107	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR WESTMORLAND				NEW RIVER 58													
11- 4-63	68	7.6	4807	196 9.78 20	107 8.80 18	696 30.26 61	16 0.41 1	0	249 4.08 8	695 14.47 30	1050 29.61 61	24 0.39 1	0.7	1.00	16	3078 2924	930
1- 8-64	53	7.3	5405	228 11.38 19	121 9.95 17	880 38.26 64	22 0.56 1	0	295 4.84 8	773 16.09 27	1365 38.49 64	21 0.34 1	0.8	0.98	14	3770 3571	1067
3-11-64	57	7.5	4634	187 9.33 22	87 7.15 17	603 26.22 61	15 0.38 1	0	259 4.25 10	647 13.47 31	886 24.99 58	16 0.26 1	0.8	0.88	16	2664 2586	825
5-11-64	76	7.2	5496	235 11.73 19	127 10.44 17	864 37.57 62	21 0.54 1	0	286 4.69 8	817 17.01 28	1366 38.52 64	12.4 0.20	0.7	1.30	16	3752 3601	1109
7- 6-64	82	7.4	5685	229 11.43 19	124 10.20 17	890 38.70 63	28 0.72 1	0	264 4.33 7	805 16.76 27	1416 39.93 65	24 0.39 1	0.7	1.08	23	3946 3671	1082
9- 7-64	86	7.7	5405	226 11.28 19	114 9.38 16	840 36.52 63	27 0.69 1	0	255 4.18 7	794 16.53 28	1350 38.07 64	22 0.35 1	1.0	1.20	18	4630 3519	1034

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number AT INTERNATIONAL BOUNDARY				ALAMO RIVER 59							
11-5-63 0930	0.38 3.15	7.8	62 240				< 25		6.8	75	DWR
Clear; vegetation on bottom; small fish observed											
1-8-64 1130	0.27 1.89	7.8	6.2 62				< 25		8.0	80	DWR
Clear; fish observed											
3-11-64 1530	0.38 3.15	7.6	70 240				160		7.6	79	DWR
Clear; small fish observed											
5-11-64 1310	0.27 2.67	7.5	62 62				< 25		9.4	105	DWR
Clear, small fish observed											
7-8-64 1425	0.44 3.54	7.4	2400 --	0.16	0.2		30		8.0	99	DWR
Clear; foam, small fish observed											
9-8-64 1210	0.42 3.67	7.4	620 240	0.12	0.10		100		9.6	110	DWR
Slightly turbid; little foam; arsenic = 0.0 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number						ALAMO RIVER					59						
AT INTERNATIONAL BOUNDARY																	
	69	7.5	3407	156	96	492	8	0	298	684	580	8.7	0.9	0.86	19	2244	785
11- 5-63				7.78	7.90	21.39	0.20		4.88	14.24	16.36	0.14					
				21	21	57	1		14	40	46					2192	
	59	7.7	4219	204	121	650	10	0	339	884	840	10	0.8	1.12	18	2985	1007
1- 8-64				10.18	9.95	28.26	0.26		5.56	18.40	23.69	0.16					
				21	20	58	1		12	38	50					2906	
	64	7.8	3137	160	80	440	8	0	290	703	524	5	1.2	0.88	11	2153	729
3-11-64				7.98	6.58	19.13	0.20		4.75	14.64	14.78	0.08					
				24	19	56	1		14	43	43					2076	
	73	7.4	1599	107	45	188	4	0	212	417	181	2.0	0.8	0.25	16	1111	452
5-11-64				5.34	3.70	8.17	0.10		3.47	8.68	5.10	0.03					
				31	21	47	1		20	50	30					1065	
	80	7.8	2809	142	73	392	8	0	262	603	488	3	0.7	0.74	18	1951	655
7- 7-64				7.09	6.00	17.04	0.20		4.29	12.55	13.76	0.05					
				23	20	56	1		14	41	45					1857	
	84	7.5	3436	162	93	490	9	0	274	695	650	15	0.8	0.96	22	2330	787
9- 8-64				8.08	7.65	21.31	0.23		4.49	14.47	18.33	0.24					
				22	21	57	1		12	39	49	1				2272	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number: ALAMO RIVER 60 NEAR CALIPATRIA											
11-4-63 1230 Slightly turbid	769.63 1031	8.3	620 2400				--		8.2	90	DWR
1-8-64 1325 Turbid; brownish color	769.20 1319	7.8	620 240				300		12.0	106	DWR
3-11-64 1050 Turbid	769.80 932	7.5	700 700				650		9.4	92	DWR
5-11-64 1450 Turbid	769.85 691	7.4	2400 6200				250		7.4	87	DWR
7-6-64 1315 Turbid	769.63 696	7.6	240 240				420		9.2	115	DWR
9-7-64 1900 Turbid; arsenic = 0.0 ppm	769.61 714	7.4	24000 6200				200		10.1	200	DWR

MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				ALAMO RIVER													
NEAR CALIPATRIA												60					
	69	7.8	3850	176	125	515	10	0	224	783	725	30	0.9	0.57	12	2608	954
11- 4-63				8.78	10.28	22.39	0.26		3.67	16.30	20.45	0.48					
				21	25	54	1		9	40	50	1				2488	
	50	7.5	3731	189	110	535	11	0	227	748	760	40	0.7	0.52	13	2600	925
1- 8-64				9.43	9.05	23.26	0.28		3.72	15.57	21.43	0.65					
				22	22	55	1		9	38	52	2				2519	
	58	7.4	3465	190	96	483	11	0	222	733	664	31	0.9	0.52	14	2389	870
3-11-64				9.48	7.90	21.00	0.28		3.64	15.26	18.72	0.50					
				25	20	54	1		10	40	49	1				2333	
	75	7.4	3858	204	118	534	14	0	251	806	769	20	0.7	0.66	8	2730	995
5-11-64				10.18	9.70	23.22	0.36		4.11	16.78	21.69	0.32					
				23	22	53	1		10	39	51	1				2598	
	81	7.5	4214	210	127	588	13	0	239	876	869	37	0.8	0.64	15	3026	1047
7- 6-64				10.48	10.44	25.57	0.33		3.92	18.24	24.51	0.60					
				22	22	55	1		8	39	52	1				2854	
	83	7.6	3817	181	119	525	11	0	217	823	750	28	0.6	0.72	16	2660	942
9- 7-64				9.03	9.79	22.83	0.28		3.56	17.13	21.15	0.45					
				22	23	54	1		8	41	50	1				2561	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number NEAR WHITEWATER				WHITEWATER RIVER 68							
11-5-63 1630 Very clear	1.21 30 Est.	7.4	1.3 <0.45				<25		9.8	103	DWR
1-10-64 0900 Clear	1.36 45 Est.	8.0	<0.45 0.46				<25		9.8	97	DWR
3-14-64 1520 Clear	1.33 5.1	7.6	<0.45 <0.45				<25		10.0	102	DWR
5-10-64 1612 Clear	1.16 7.7	7.6	2.3 130				<25		8.2	87	DWR
7-6-64 0800 Clear	1.52 50 Est.	7.3	13 6.2				<25		8.0	93	DWR
9-7-64 1505 Clear	1.40 45 Est.	7.4	240 240				<25		8.6	92	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR WHITEWATER						WHITEWATER RIVER					68							
11- 5-63	65	7.6	467	56	18	15	5	0	227	42	5	1.0	0.9	0.09	15	279		214
				2.79	1.48	0.65	0.13		3.72	0.87	0.14	0.02						
				55	29	13	3		78	18	3					270		
1-10-64	60	7.9	424	56	15	16	5	0	234	43	5	2.0	1.0	0	17	270		201
				2.79	1.23	0.70	0.13		3.84	0.90	0.14	0.03						
				58	25	14	3		78	18	3	1				275		
3-14-64	62	8.0	439	58	12	16	5	0	233	41	4	2.0	1.1	0.02	17	262		194
				2.89	0.99	0.70	0.13		3.82	0.85	0.11	0.03						
				61	21	15	3		79	18	2	1				271		
5-10-64	65	7.8	451	59	15	16	5	0	237	41	5	1.6	1.0	0	19	275		209
				2.94	1.23	0.70	0.13		3.88	0.85	0.14	0.03						
				59	25	14	3		79	17	3	1				279		
7- 6-64	74	7.8	428	54	15	15	4	0	222	41	5	2	1.0	0.02	17	258		196
				2.69	1.23	0.65	0.10		3.64	0.85	0.14	0.03						
				58	26	14	2		78	18	3	1				263		
9- 7-64	66	7.8	412	48	16	15	4	0	217	39	4	2.0	1.0	0.02	17	240		186
				2.40	1.32	0.65	0.10		3.56	0.81	0.11	0.03						
				54	30	15	2		79	18	2	1				253		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SALTON SEA			68A				
AT STATE PARK											
11-5-63 1350 Slightly turbid; grimy, large fish observed	None Sea	8.9	2.3 2.2				--		12.0	141	DWR
1-9-64 1350 Slightly turbid; grimy	None Sea	8.4	0.6 0.6				30		16.8	159	DWR
3-12-64 1400 Slightly turbid; high winds 30 to 40 mph	None Sea	8.2	2.3 <0.45				100		10.4	110	DWR
5-10-64 1830 Slightly turbid	None Sea	8.2	2.3 6.2				< 25		14.6	169	DWR
7-6-64 1010 Clear; saline odor	None Sea	7.9	23 6.2				< 25		2.8	39	DWR
9-7-64 1800 Grimy; small fish observed	None Sea	8.0	2.3 2.3				< 25		8.8	115	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number AT STATE PARK				SALTON SEA							68A						
11- 5-63	75	8.2	43100	770 38.42 7	1058 87.01 16	9560 415.67 76	144 3.68 1	0	187 3.06 1	7330 152.61 28	13750 387.75 71	12 0.19	2.8	7.10	0	34156 32726	6277
1- 9-64	56	8.3	40650	776 38.72 7	1010 83.06 15	9950 432.63 77	160 4.09 1	24 0.80	173 2.84 1	7262 151.19 27	14100 397.62 72	7.4 0.12	2.9	7.80	5	34375 33390	6094
3-12-64	65	8.3	38595	800 39.92 7	986 81.09 15	9600 417.41 77	152 3.89 1	31 1.03	199 3.26 1	7139 148.63 27	13750 387.75 72	1.2 0.02	2.5	7.80	1	33315 32568	6095
5-10-64	74	7.3	37750	776 38.72 7	1013 83.31 15	9576 416.36 77	154 3.94 1	0	246 4.03 1	7114 148.11 27	13732 387.24 72	17 0.27	2.5	7.70	1	33770 32514	6106
7- 6-64	81	7.9	40048	770 38.42 7	1030 84.71 15	9680 420.89 77	154 3.94 1	0	190 3.11 1	7353 153.09 28	13910 392.26 72	9 0.15	3.0	13.80	7	34471 33023	6161
9- 7-64	86	7.5	40160	754 37.62 7	1080 88.82 16	9800 426.10 77	165 4.22 1	0	173 2.84 1	7400 154.07 28	14050 396.21 72	10 0.16	2.6	8.50	3	34640 33358	6327

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				WHITEWATER RIVER 68B							
NEAR MECCA											
11- -65 1[illegible] Turbid	None 100 Est.	9.6	230 230	2.0	0.1		--		8.2	96	DWR
1-[illegible]-66 0[illegible] Slightly turbid	None 100 Est.	8.3	660 130				70		9.8	101	
5-1 -66 1[illegible] Gray algae; vegetation floating throughout water	None 100 est.	7.2	92 230				500		8.6	98	DWR
7-[illegible]-66 1[illegible] Turbid	None 100 est.	7.7	920 [illegible]				280		9.2	108	DWR
9-[illegible]-66 0925 Turbid; algae; sewage odor	None 150 est.	7.6	920 2400	0.90	0.1[illegible]		190		7.8	96	DWR
9-7-66 1[illegible] Turbid	None 100 est.	7.7	[illegible] [illegible]				300		9.0	115	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR MECCA						WHITEWATER RIVER 68B											
	75	8.2	3804	173	55	605	13	0	357	957	500	38	3.6	1.08	23	2583	658
11- 5-63				8.63	4.52	26.31	0.33		5.85	19.92	14.10	0.61					
				22	11	66	1		14	49	35	2				2544	
	61	8.0	3425	164	45	600	14	0	351	900	468	32	3.2	1.00	22	2425	594
1- 9-64				8.18	3.70	26.09	0.36		5.75	18.74	13.20	0.52					
				21	10	68	1		15	49	35	1				2422	
	68	8.1	3640	171	47	630	12	0	357	954	480	29	3.4	1.06	21	2523	620
3-12-64				8.53	3.87	27.39	0.31		5.85	19.86	13.54	0.47					
				21	10	68	1		15	50	34	1				2524	
	76	7.4	3406	173	49	582	13	0	342	913	461	14.8	3.4	1.00	20	2464	634
5-10-64				8.63	4.03	25.31	0.33		5.61	19.01	13.00	0.24					
				23	11	66	1		15	50	34	1				2398	
	72	7.9	3166	160	46	520	12	0	342	830	401	24	4.0	0.88	18	2260	588
7- 6-64				7.98	3.78	22.61	0.31		5.61	17.28	11.31	0.39					
				23	11	65	1		16	50	33	1				2184	
	84	7.8	3356	160	53	560	13	0	337	913	450	45	3.5	1.14	24	2380	617
9- 7-64				7.98	4.36	24.35	0.33		5.52	19.01	12.69	0.73					
				22	12	66	1		15	50	33	2				2388	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				WARM CREEK			50B				
AT COLTON											
10-1-63	None	7.6	6.2			1.9	<25		6.7	78	DWR
--	--		--						7.1	94	
Composite; samples taken at 0730, 1145, and 1600 hours									4.8	60	
11-5-63	None	7.4	6.2	27	2.72	0.7	100		7.2	74	DWR
--	--		--						7.5	89	
Composite; samples taken at 0725, 1235, and 1600 hours									6.7	76	
12-3-63	None	--	240	27	6.0	9.5	50		7.5	74	DWR
--	8 est.		--						7.2	79	
Composite; samples taken 0735, 1209, and 1530 hours									7.6	81	
1-3-64	None	7.4	23	29	3.28	2.9	75		7.9	83	DWR
--	6 est.		--						7.9	80	
Composite; samples taken at 0400, 1215, and 1930 hours									8.4	79	
2-3-64	None	7.3	13	33	4.3	3.6	<25		8.3	87	DWR
--	--		--						9.0	78	
Composite; samples taken at 1145, 1430, and 1600 hours									8.1	80	
3-5-64	None	7.5	700 +	31	3.52	18	100		6.3	62	DWR
--	--		--						7.1	79	
Composite; samples taken at 0725,1200, and 1530 hours									6.8	73	
4-9-64	None	7.3	220	28	5.0	6.5	<25		6.8	73	DWR
--	4 est.		--						7.1	78	
Composite; samples taken at 0730, 1230, and 1610 hours									5.8	65	
5-7-64	None	7.2	2400	19	3.20	10	100		7.8	82	DWR
1100	9 est.		2400								
Slightly turbid; some foam											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as CO_3
Stream name and station number				WARM CREEK							508						
AT COLTON																	
10- 1-63	75	7.3	900	44 2.20 25	20 1.64 19	106 4.61 53	13 0.33 4	0	183 3.00 35	68 1.42 17	105 2.96 35	74 1.19 14	0.9	0.48	32	552 553	192
11- 5-63	63	7.5	1022	52 2.59 26	19 1.56 16	122 5.30 54	15 0.38 4	0	176 2.88 30	77 1.60 17	134 3.78 39	87 1.40 14	1.1	0.56	30	630 624	208
12- 3-63	65	7.3	1040	41 2.05 21	24 1.97 20	120 5.22 54	15 0.38 4	0	256 4.20 42	66 1.37 14	122 3.44 34	69 1.11 11	1.1	0.50	40	610 624	201
1- 3-64	--	7.1	955	50 2.50 27	20 1.64 17	112 4.87 52	15 0.38 4	0	161 2.64 29	76 1.58 17	117 3.30 36	104 1.68 18	1.0	0.56	29	630 604	207
2- 3-64	64	7.0	822	61 3.04 37	13 1.07 13	85 3.70 45	15 0.38 5	0	178 2.92 35	75 1.56 19	69 1.95 24	114 1.84 22	1.0	0.44	27	540 548	206
3- 5-64	66	7.5	1154	66 3.29 31	17 1.40 13	125 5.44 52	16 0.41 4	0	320 5.24 46	71 1.48 13	143 4.03 36	32 0.52 5	1.0	0.62	29	654 658	235
4- 9-64	67	7.4	962	46 2.30 25	20 1.64 18	115 5.00 54	14 0.36 4	0	204 3.34 35	69 1.44 15	132 3.72 39	64 1.03 11	1.0	0.68	29	590 591	197
5- 7-64	65	7.1	969	41 2.05 22	23 1.89 20	114 4.96 54	14 0.36 4	0	254 4.16 43	67 1.39 14	124 3.50 36	35 0.56 6	1.1	0.66	31	615 576	197

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number											
AT COLTON				WARM CREEK				50B			
6-1-64	None	7.4	230	4.75	3.05	7	160		7.8	88	DWR
--	--		--						8.5	101	
Composite; samples taken at 0745, 1230, and 1530 hours									9.5	113	
7-1-64	None	7.5	620	32	1.7		30		8.3	97	DWR
--	10 est.		62						10.0	120	
Composite; samples taken at 0730, 1200, and 1600 hours									5.5	68	
8-3-64	None	7.4	7000	29	2.6				9.4	112	DWR
--	8 est.		7000+						8.9	110	
Composite; samples taken at 0800, 1145, and 1545 hours									8.0	101	
9-3-64	None	7.3	7000	28	3.4	2	56		8.6	104	DWR
0945	6 est.		7000								
Slightly turbid											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number							WARM CREEK					50B						
AT COLTON																		
6- 1-64	71	6.9	778	42	22	74	14	0	186	62	71	78	0.8	0.38	28	490		196
				2.10	1.81	3.22	0.36		3.05	1.29	2.00	1.26						
				28	24	43	5		40	17	26	17					484	
7- 1-64	75	7.1	921	44	19	114	13	0	162	83	120	94	1.3	0.56	29	602		188
				2.20	1.56	4.96	0.33		2.66	1.73	3.38	1.52						
				24	17	55	4		29	19	36	16					597	
8- 3-64	82	7.2	765	38	18	87	12	0	146	69	80	100	1.2	0.45	29	564		169
				1.90	1.48	3.78	0.31		2.39	1.44	2.26	1.61						
				25	20	51	4		31	19	29	21					506	
9- 3-64	79	7.4	820	39	19	96	13	0	204	71	89	50	1.6	0.64	27	553		176
				1.95	1.56	4.17	0.33		3.34	1.48	2.51	0.81						
				24	19	52	4		41	18	31	10					507	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number SANTA ANA RIVER 51											
NEAR ARLINGTON											
10-3-63 1520 Clear	1.23 22	8.0	230 62	0.1	0.07		<25		9.6	107	DWR
11-7-63 1005 Slightly turbid; storm runoff	1.23 12	8.2	130 230	0.22	0.08		30		9.2	94	DWR
12-6-63 1105 Clear; small fish observed; some foam	1.09 20	7.7	23 <4.5	0.20	0.08		<25		9.0	92	DWR
1-14-64 1650 Clear; fish and insects observed	1.07 22	7.6	62 23				<25		8.6	85	DWR
2-7-64 1150 Clear	1.14 24	7.8	240 ---	0.14	0.08		<25		9.8	99	DWR
3-5-64 1000 Clear; no foam	1.15 20	7.6	50 23				55		8.4	83	DWR
4-6-64 1450 Clear; little foam	1.12 24	7.6	62 130	0.40	0.08		<25		8.0	89	DWR
5-8-64 0935 Clear; foam	1.14 18	7.6	700+ 700+	0.36	0.1		<25		8.4	75	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR ARLINGTON						SANTA ANA RIVER					51						
10- 3-63	70	8.0	1050	114 5.69 51	25 2.06 18	76 3.30 30	5 0.13 1	0	334 5.47 49	116 2.42 22	101 2.85 25	30 0.48 4	0.8	0.14	25	681 657	388
11- 7-63	62	7.9	1066	117 5.84 51	25 2.06 18	77 3.35 29	5 0.13 1	0	342 5.61 50	120 2.50 22	101 2.85 25	23 0.37 3	0.8	0.14	26	670 663	395
12- 6-63	62	7.8	1068	107 5.34 47	31 2.55 22	78 3.39 30	5 0.13 1	0	349 5.72 50	120 2.50 22	102 2.88 25	21 0.34 3	0.5	0.14	35	645 671	395
1-14-64	60	8.1	1022	114 5.69 50	27 2.22 19	78 3.39 30	5 0.13 1	0	346 5.67 49	120 2.50 22	104 2.93 26	23 0.37 3	0.7	0.12	25	695 667	396
2- 7-64	63	8.0	1027	116 5.79 52	21 1.73 16	80 3.48 31	5 0.13 1	0	349 5.72 50	123 2.56 22	102 2.88 25	21 0.34 3	0.8	0.14	25	690 666	376
3- 5-64	59	7.9	1058	117 5.84 50	27 2.22 19	80 3.48 30	4 0.10 1	0	348 5.70 48	121 2.52 21	102 2.88 24	45 0.73 6	0.7	0.16	26	677 694	403
4- 6-64	69	8.0	1018	110 5.49 48	29 2.38 21	80 3.48 30	5 0.13 1	0	340 5.57 49	120 2.50 22	102 2.88 25	24 0.39 3	0.6	0.16	25	660 663	394
5- 8-64	51	7.5	1013	115 5.74 51	26 2.14 19	74 3.22 29	5 0.13 1	0	332 5.44 50	117 2.44 22	102 2.88 26	12.4 0.20 2	0.7	0.14	29	707 644	394

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER 51							
NEAR ARLINGTON											
6-5-64 1250 Clear	1.13 18	7.6	62 62	0.06	0.06		< 25		8.8	97	DWR
7-14-64 1315 Clear	1.12 17	7.8	6 6				< 25		9.0	93	DWR
8-6-64 1215 Clear; some foam	2.36 16.7	7.7	7000 620	0.06	0.06		--		8.0	92	DWR
9-4-64 1005 Clear	6.02 17	7.5	62 < 0.45	0.04	0.08		< 25		9.8	102	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C	TDS Computed	Total hardness as $CaCO_3$
Stream name and station number																			
NEAR ARLINGTON						SANTA ANA RIVER 51													
6- 5-64	69	7.9	1006	116	26	69	5	0	330	119	99	22	0.7	0.13	27	697			397
				5.79	2.14	3.00	0.13		5.41	2.48	2.79	0.35							
				52	19	27	1		49	22	25	3						646	
7-14-64	69	7.6	1010	112	25	72	4	0	327	117	101	24	0.6	0.12	25	699			382
				5.59	2.06	3.13	0.10		5.36	2.44	2.85	0.39							
				51	19	29	1		49	22	26	4						641	
8- 6-64	73	7.2	1010	114	23	74	8	0	305	115	101	42	1.2	0.14	27	713			379
				5.69	1.89	3.22	0.20		5.00	2.39	2.85	0.68							
				52	17	29	2		46	22	26	6						655	
9- 4-64	64	7.8	1015	106	29	70	5	0	320	117	102	23	0.7	0.14	26	680			384
				5.29	2.38	3.04	0.13		5.24	2.44	2.88	0.37							
				49	22	28	1		48	22	26	3						636	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51A				
BELOW PRADO DAM											
10-3-63 1400 Slightly turbid; foam	2.11 40	7.8	620 620	3.0	0.44		<25		8.8	96	DWR
11-7-63 1130 Slightly turbid; storm runoff	2.22 52	8.2	7000 620	4.3	0.32		35		8.7	89	DWR
12-6-63 0925 Slightly turbid; foam	2.17 44	7.6	230 62	2.65	0.34		<25		7.8	71	DWR
1-14-64 1810 Clear	2.23 46	7.8	7000+ 2400	4.5	0.56		<25		8.6	84	DWR
2-7-64 1345 Clear; some foam	2.24 48	7.6	620 620	3.7	0.41		<25		9.2	91	DWR
3-5-64 1120 Slightly turbid; foam; water spreading over fields upstream	2.26 50	7.3	60 230	3.5	0.38		33		8.8	86	DWR
4-6-64 1130 Clear; much foam	2.29 62	7.4	62 620	5.2	0.70		<25		8.0	86	DWR
5-8-64 1155 Clear; little foam, cattle in water upstream	2.20 50	7.4	230 230	1.8	0.9		50		9.8	105	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
BELOW PRADO DAM						SANTA ANA RIVER					51A						
10- 3-63	68	8.2	1153	108 5.39 45	26 2.14 18	98 4.26 36	6 0.15 1	0	343 5.62 46	123 2.56 21	125 3.53 29	29 0.47 4	0.9	0.35	35	708 720	377
11- 7-63	62	7.7	1148	105 5.24 43	27 2.22 18	102 4.43 37	8 0.20 2	0	342 5.61 47	123 2.56 22	122 3.44 29	17 0.27 2	0.8	0.34	27	690 700	373
12- 6-63	52	7.8	1171	103 5.14 41	32 2.63 21	103 4.48 36	6 0.15 1	0	364 5.97 48	125 2.60 21	129 3.64 29	12 0.19 2	0.7	0.32	34	700 724	389
1-14-64	58	7.7	1114	108 5.39 44	27 2.22 18	105 4.57 37	6 0.15 1	0	344 5.64 46	128 2.66 22	126 3.55 29	20 0.32 3	0.7	0.35	25	730 715	381
2- 7-64	59	7.9	1124	113 5.64 45	28 2.30 18	100 4.35 35	6 0.15 1	0	359 5.88 47	128 2.66 21	128 3.61 29	17 0.27 2	0.9	0.38	23	715 721	397
3- 5-64	58	7.4	1131	110 5.49 44	27 2.22 18	104 4.52 37	6 0.15 1	0	354 5.80 47	121 2.52 21	127 3.58 29	22 0.35 3	0.7	0.44	37	707 729	386
4- 6-64	67	7.7	1079	105 5.24 44	27 2.22 19	100 4.35 36	6 0.15 1	0	336 5.51 47	122 2.54 21	123 3.47 29	19 0.31 3	0.6	0.44	23	680 691	373
5- 8-64	66	7.7	1106	111 5.54 45	28 2.30 19	97 4.22 35	6 0.15 1	0	344 5.64 47	130 2.71 23	124 3.50 29	6.8 0.11 1	0.7	0.35	31	738 704	392

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51A				
BELOW PRADO DAM											
6-5-64 1140 Clear; silty; foam	2.08 32	7.3	2400 7000	1.6	0.26		40		8.8	9.6	DWR
7-14-64 1445 Clear; some foam; swimmers upstream	1.96 23	7.6	60 230	0.84	0.18		40		9.8	108	DWR
8-5-64 1120 Clear; little foam	1.94 20.8	7.4	1300 2300	0.91	0.26		--		9.6	112	DWR
9-4-64 1230 Clear	1.96 22	7.3	230	1.4	0.28		< 25		8.8	100	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
BELOW PRADO DAM						SANTA ANA RIVER					51A						
	68	7.4	1119	116	27	94	6	0	372	122	124	7.4	0.6	0.33	27	725	401
6- 5-64				5.79	2.22	4.09	0.15		6.10	2.54	3.50	0.12					
				47	18	33	1		50	21	29	1				707	
	78	7.5	1125	112	28	92	5	0	347	137	126	8	0.7	0.33	24	754	395
7-14-64				5.59	2.30	4.00	0.13		5.69	2.85	3.55	0.13					
				47	19	33	1		47	23	29	1				704	
	75	7.3	1126	115	26	95	5	0	356	129	127	22	0.7	0.34	26	750	394
8- 5-64				5.74	2.14	4.13	0.13		5.83	2.69	3.58	0.35					
				47	18	34	1		47	22	29	3				721	
	72	7.6	1133	106	38	96	5	0	348	132	131	11	0.5	0.52	26	710	421
9- 4-64				5.29	3.13	4.17	0.13		5.70	2.75	3.69	0.18					
				42	25	33	1		46	22	30	1				717	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51B				
NEAR MENTONE											
10-4-63 1400 Clear	None 15	8.4	23 13	0.0	0.00		< 25		10.4	106	DWR
11-6-63 1105 Clear; raining	None --	8.2	13 130				< 25		9.6	88	DWR
12-5-63 1310 Clear	None 15	8.0	1.3 6.2				< 25		10.6	94	DWR
1-14-64 1450 Clear	None 15	7.8	0.60 0.46				< 25		11.0	89	DWR
2-7-64 0930 Clear	None 15	7.8	1.30 2.30				< 25		11.0	87	DWR
3-6-64 1340 Clear	None 17	7.8	0.60 0.60				< 25		10.6	87	DWR
4-4-64 1050 Clear; little foam	None 17	7.6	2.3 2.3	0.00	0.00		< 25		10.0	83	DWR
5-7-64 1305 Clear; high flow	None 80 est.	8.2	6.2 13				< 25		11.2	87	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				SANTA ANA RIVER 518													
NEAR MENTONE																	
10- 4-63	62	8.4	280	28	7	19	2	0	134	19	3	9.9	0.5	0.08	18	159	99
				1.40	0.58	0.83	0.05		2.20	0.40	0.08	0.16					
				49	20	29	2		77	14	3	6				172	
11- 6-63	53	8.1	293	29	8	20	2	0	138	22	6	0.0	0.6	0.09	18	195	106
				1.45	0.66	0.87	0.05		2.26	0.46	0.17						
				48	22	29	2		78	16	6					173	
12- 5-63	50	8.0	266	20	12	20	2	0	146	15	7	1.0	0.6	0.06	29	155	100
				1.00	0.99	0.87	0.05		2.39	0.31	0.20	0.02					
				34	34	30	2		82	11	7	1				178	
1-14-64	43	8.2	257	29	6	19	2	0	139	15	6	0	0.5	0.06	20	170	97
				1.45	0.49	0.83	0.05		2.28	0.31	0.17						
				51	17	29	2		83	11	6					166	
2- 7-64	42	8.1	248	26	7	19	2	0	146	16	5	1.0	0.6	0.06	21	155	94
				1.30	0.58	0.83	0.05		2.39	0.33	0.14	0.02					
				47	21	30	2		83	11	5	1				169	
3- 6-64	44	7.8	247	25	8	18	2	0	131	16	8	1.0	0.5	0.06	19	145	96
				1.25	0.66	0.78	0.05		2.15	0.33	0.23	0.02					
				46	24	28	2		79	12	8	1				162	
4- 4-64	45	8.0	221	25	6	15	2	0	127	2	6	1.5	0.5	0.06	19	135	87
				1.25	0.49	0.65	0.05		2.08	0.04	0.17	0.02					
				51	20	27	2		90	2	7	1				139	
5- 7-64	41	7.6	212	24	4	13	1	0	117	11	4	0	0.5	0.06	20	155	77
				1.20	0.33	0.57	0.03		1.92	0.23	0.11						
				56	15	27	1		85	10	5					135	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51B				
NEAR MENTONE											
6-6-64 0725 Clear	None 80 est.	7.5	6.2 6.2				<25		10.4	98	DWR
7-14-64 1110 Clear	None 20	7.4	5 6.2				<25		10.2	100	DWR
8-6-64 1500 Slightly turbid	None 20	--	700+ 700+				--		10.0	107	DWR
9-3-64 1130 Clear; arsenic = 0.0 ppm	None 22	7.8	23 240				<25		10.0	79	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number				SANTA ANA RIVER 51B													
NEAR MENTONE																	
	55	7.4	236	27	5	18	2	0	125	14	4	1.1	0.4	0.05	20	147	88
6- 4-64				1.35	0.41	0.78	0.05		2.05	0.29	0.11	0.02					
				52	16	30	2		83	12	4	1				153	
	59	7.3	239	27	6	15	1	0	128	15	6	0.6	0.4	0.07	18	157	92
7-14-64				1.35	0.49	0.65	0.03		2.10	0.31	0.17	0.01					
				54	19	26	1		81	12	7					152	
	66	7.3	243	28	5	15	2	0	126	12	6	1	0.5	0.06	17	166	91
8- 6-64				1.40	0.41	0.65	0.05		2.07	0.25	0.17	0.02					
				56	16	26	2		82	10	7	1				148	
	58	7.9	245	29	5	15	2	0	129	12	7	1	0.5	0.08	14	161	93
9- 3-64				1.45	0.41	0.65	0.05		2.11	0.25	0.20	0.02					
				57	16	25	2		82	10	8	1				149	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number NEAR NORCO				SANTA ANA RIVER			51E				
10-3-63 1445 Clear	None 20 est.	8.0	620 620	11	1.2		< 25		9.2	104	DWR
11-7-63 1100 Slightly turbid; storm runoff	None 30 est.	7.7	620 2400	9.25	0.90		45		5.0	52	DWR
12-6-63 1005 Slightly turbid; some foam	None 40 est.	7.4	620 620	5.8	0.90		< 25		5.2	48	DWR
1-14-64 1720 Clear; some foam	None 35 est.	7.6	7000 2400	11	1.48		< 25		6.0	59	DWR
2-7-64 1350 Slightly turbid; some foam	None 22 est.	7.4	130 500	6.3	0.70		30		8.8	94	DWR
3-5-64 1055 Slightly turbid; some foam	None 20 est.	7.1	230 1300	8.75	1.40		35		8.6	84	DWR
4-6-64 1335 Clear; some foam	None 50 est.	7.3	130 2300	10	1.60		< 25		8.2	92	DWR
5-8-64 1120 Clear; foam	None 18 est.	7.4	620 620	4.3	0.9		< 25		7.0	73	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR NORCO						SANTA ANA RIVER					51E						
10- 3-63	72	7.7	1187	98 4.89 40	28 2.30 19	112 4.87 40	8 0.20 2	0	322 5.28 43	131 2.73 22	130 3.67 30	37 0.60 5	1.0	0.43	28	724 732	360
11- 7-63	62	7.8	1100	89 4.44 39	25 2.06 18	106 4.61 41	9 0.23 2	0	300 4.92 44	120 2.50 22	120 3.38 30	26 0.42 4	0.9	0.42	25	660 669	325
12- 6-63	54	7.6	1252	100 4.99 38	32 2.63 20	122 5.30 40	8 0.20 2	0	349 5.72 44	140 2.91 22	146 4.12 31	21 0.34 3	1.1	0.46	34	755 776	381
1-14-64	59	7.5	1122	97 4.84 40	26 2.14 18	112 4.87 40	8 0.20 2	0	317 5.20 43	132 2.75 23	125 3.53 29	34 0.55 5	1.0	0.52	26	720 717	349
2- 7-64	61	7.5	1101	109 5.44 44	25 2.06 17	106 4.61 38	7 0.18 1	0	344 5.64 46	130 2.71 22	124 3.50 28	29 0.47 4	1.0	0.44	26	710 727	375
3- 5-64	58	7.3	1106	63 3.14 26	49 4.03 34	105 4.57 38	7 0.18 2	0	325 5.33 45	123 2.56 22	125 3.53 30	23 0.37 3	0.8	0.60	27	695 683	359
4- 6-64	70	7.5	1066	94 4.69 41	27 2.22 19	103 4.48 39	7 0.18 2	0	314 5.15 45	122 2.54 22	118 3.33 29	28 0.45 4	0.8	0.46	27	675 682	346
5- 8-64	64	7.6	1155	109 5.44 44	27 2.22 18	106 4.61 37	6 0.15 1	0	332 5.44 45	135 2.81 23	133 3.75 31	12.0 0.19 2	0.9	0.43	30	762 723	383

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51E				
NEAR NORCO											
6-5-64 1215 Clear	None 30 est.	7.3	2400 620	4.5	0.5		<25		8.0	87	DWR
7-14-64 1410 Clear; swimmers upstream	None 18 est.	7.4	620 62				35		9.0	109	DWR
8-6-64 1135 Clear; some foam; swimmers in river	None 20 est.	7.5	2400 2400	5	0.57		--		5.6	67	DWR
9-4-64 1115 Clear; arsenic = 0.0 ppm	None 15 est.	7.4	62 210	8.8	0.82		<25		9.0	98	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap180°C Evap105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR NORCO				SANTA ANA RIVER 51E													
6- 5-64	68	7.5	1144	111 5.54 44	26 2.14 17	107 4.65 37	7 0.18 1	0	336 5.51 45	132 2.75 22	131 3.69 30	20 0.32 3	0.8	0.42	27	754 727	384
7-14-64	79	7.4	1139	101 5.04 42	27 2.22 18	108 4.70 39	7 0.18 1	0	334 5.47 44	138 2.87 23	129 3.64 30	20 0.32 3	0.9	0.49	24	758 720	363
8- 6-64	77	7.2	1169	108 5.39 43	24 1.97 16	114 4.96 40	7 0.18 1	0	347 5.69 45	128 2.66 21	135 3.81 30	35 0.56 4	1.4	0.53	26	780 750	368
9- 4-64	68	7.6	1145	100 4.99 41	25 2.06 17	111 4.83 40	8 0.20 2	0	320 5.24 43	127 2.64 22	137 3.86 32	26 0.42 3	0.6	0.50	27	720 719	353

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA ANA RIVER			51F				
AT COLTON											
3-6-64 0930	5.44 19	7.2	240 700+	34	5.0	12	400		7.2	79	DWR
Turbid; foam; solid particles flowing throughout stream											
4-4-64 0520	5.66 16	7.3	62 62	38	6.3	14	< 25		10.2	97	DWR
Clear; low flow											
5-7-64 1045	6.01 18	7.4	700 210	32	5.20	15	750		8.6	90	DWR
Turbid, foam											
6-4-64 0615	5.82 6.0	7.4	620 2400	4.5	4.20		70		8.2	91	DWR
Clear; some foam											
7-14-64 1240	5.16 16.0	7.4	620 62	0.8	3.1	6	63		8.4	105	DWR
Clear; some foam											
8-6-64 1250	4.99 16.2	7.5	230 230	25	4	13	--		8.0	107	DWR
Slightly turbid; foam											
9-3-64 1015	4.84 9.8	7.3	7000+ 620	40	4.2	21	95		8.6	106	DWR
Slightly turbid; some foam; arsenic = 0.0 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT COLTON						SANTA ANA RIVER						51F					
3- 6-64	68	7.4	1028	52 2.59 26	20 1.64 16	123 5.35 54	16 0.41 4	0	290 4.75 46	76 1.58 15	128 3.61 35	20 0.32 3	1.0	0.62	31	615 610	212
4- 4-64	56	7.5	921	33 1.65 18	22 1.81 20	117 5.09 57	15 0.38 4	0	279 4.57 49	79 1.64 17	96 2.71 29	30 0.48 5	1.2	0.76	35	570 566	173
5- 7-64	64	7.2	801	29 1.45 20	21 1.73 23	88 3.83 52	14 0.36 5	0	249 4.08 52	71 1.48 19	63 1.78 22	36 0.58 7	1.5	0.52	32	510 478	159
6- 4-64	70	7.3	1093	42 2.10 20	28 2.30 22	134 5.83 55	16 0.41 4	0	291 4.77 46	73 1.52 15	139 3.92 38	12 0.19 2	1.7	0.70	34	645 623	220
7-14-64	81	7.3	865	36 1.80 23	21 1.73 22	92 4.00 51	13 0.33 4	0	292 4.79 57	71 1.48 18	72 2.03 24	3 0.05 1	2.0	0.65	31	526 485	177
8- 6-64	88	7.3	851	39 1.95 25	20 1.64 21	91 3.96 51	10 0.26 3	0	240 3.93 47	72 1.50 18	79 2.23 27	42 0.68 8	1.8	0.56	31	543 504	180
9- 3-64	80	7.5	903	36 1.80 22	23 1.89 23	92 4.00 50	14 0.36 4	0	322 5.28 57	73 1.52 17	77 2.17 24	14 0.23 3	1.6	0.64	30	544 520	185

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number SAN TIMOTEO CREEK 51G											
NEAR LOMA LINDA											
3-6-64 1035 Clear; little foam	2.27 1.8	7.4	62 500	33	3.44	15	<25		8.2	88	DWR
4-4-64 1205 Clear; foam; sewage odor; insects	2.20 0.6	7.7	700+ 700+	38	4.7	24	<25		7.8	93	DWR
5-7-64 1150 Turbid; much foam	-- 1.3	7.6	7000 230	24	1.40	5.8	100		9.4	100	DWR
6-4-64 0655 Clear; foam	2.15 0.3	7.6	620 1300	28.5	2.6		<25		8.0	84	DWR
7-14-64 1150 Clear; foam; green algae covering streambed	2.34 1.2	7.8	620 130	1.7	1.8	3	35		9.2	102	DWR
8-6-64 1350 Clear; some foam	2.34 1.6	8.2	1300 620	15	1.6	6	--		8.8	119	DWR
9-3-64 1050 Slightly turbid; some foam; arsenic = 0.0 ppm	2.42 2.2	7.3	130 620	11	1	0.4	132		9.0	104	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				SAN TIMOTEO CREEK 516														
NEAR LOMA LINDA																		
	66	7.8	1024	57	23	120	13	0	393	82	96	3.1	1.2	0.46	26	600		237
3- 6-64				2.84	1.89	5.22	0.33		6.44	1.71	2.71	0.05						
				28	18	51	3		59	16	25						615	
	70	7.6	1104	52	32	124	12	0	437	107	98	5.0	1.0	0.44	25	640		261
4- 4-64				2.59	2.63	5.39	0.31		7.16	2.23	2.76	0.08						
				24	24	49	3		59	18	23	1					671	
	58	7.2	703	44	18	70	9	0	224	53	65	23	1.0	0.20	22	440		184
5- 7-64				2.20	1.48	3.04	0.23		3.67	1.10	1.83	0.37						
				32	21	44	3		53	16	26	5					415	
	65	7.4	1004	53	31	124	14	0	369	123	77	10	1.4	0.40	28	634		260
6- 4-64				2.64	2.55	5.39	0.36		6.05	2.56	2.17	0.16						
				24	23	49	3		55	23	20	1					643	
	79	7.4	1028	50	32	122	12	0	408	95	84	0.6	1.4	0.44	24	650		257
7-14-64				2.50	2.63	5.30	0.31		6.69	1.98	2.37	0.01						
				23	24	49	3		61	18	21						622	
	89	7.4	845	49	19	98	10	0	288	80	63	38	2.1	0.28	25	552		201
8- 6-64				2.45	1.56	4.26	0.26		4.72	1.67	1.78	0.61						
				29	18	50	3		54	19	20	7					526	
	74	7.4	707	49	18	75	8	0	250	62	52	35	1.6	0.22	24	468		197
9- 3-64				2.45	1.48	3.26	0.20		4.10	1.29	1.47	0.56						
				33	20	44	3		55	17	20	8					448	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				CHINO CREEK			86				
NEAR CHINO											
10-3-63 1300 Turbid; mosquito larvae and insects	None 2 Est.	8.2	6200 1300	7.8			25		6.8	79	DWR
11-7-63 1215 Very turbid; sewage odor	None 4 Est.	8.2	24,000 13,000	3.4	0.52		100		9.5	91	DWR
12-6-63 0845 Turbid; sewage odor; foam	None 1.5 Est.	8.0	60 130	15	1.72		100		6.2	50	DWR
1-14-64 1850 No flow; sewage odor	None Ponded	8.0	62 62	--	--		<25		6.8	58	DWR
2-7-64 1400 Turbid; sewage odor; little foam	None 0.5 Est.	7.9	230 620	8.3	0.72		150		7.2	66	DWR
3-5-64 1200 Turbid; foam; approx. 2 cfs. of irrigation water into stream	None 4 Est.	8.0	230 2400	13	1.40		50		6.6	60	DWR
4-6-64 1050 Slightly turbid; foam; sewage odor; small marine life	None 0.5 Est.	8.0	23 62	10	0.78		40		7.4	73	DWR
5-8-64 1220 Turbid; sewage odor; some foam	None 2 Est.	7.8	240 700				30		13.2	133	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C	TDS Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																		
NEAR CHINO						CHINO CREEK					86							
10- 3-63	74	7.7	548	44	13	45	16	0	229	31	35	12	0.9	0.32	25	338		164
				2.20	1.07	1.96	0.41		3.75	0.65	0.99	0.19						
				39	19	35	7		67	12	18	3					335	
11- 7-63	57	7.2	357	37	9	17	13	0	134	28	17	17	0.8	0.12	12	230		130
				1.85	0.74	0.74	0.33		2.20	0.58	0.48	0.27						
				51	20	20	9		62	16	14	8					217	
12- 6-63	44	7.6	909	53	22	96	29	0	386	52	74	7.5	1.1	0.28	34	560		223
				2.64	1.81	4.17	0.74		6.33	1.08	2.09	0.12						
				28	19	45	8		66	11	22	1					559	
1-14-64	48	7.7	977	77	22	102	33	0	483	44	70	17	1.5	0.48	26	625		283
				3.84	1.81	4.43	0.84		7.92	0.92	1.97	0.27						
				35	17	41	8		71	8	18	2					630	
2- 7-64	53	7.3	632	59	17	55	16	0	273	56	36	30	0.6	0.16	29	410		217
				2.94	1.40	2.39	0.41		4.47	1.17	1.02	0.48						
				41	20	33	6		63	16	14	7					433	
3- 5-64	52	7.7	800	57	19	77	24	0	346	53	56	15	1.1	0.34	27	505		220
				2.84	1.56	3.35	0.61		5.67	1.10	1.58	0.24						
				34	19	40	7		66	13	18	3					500	
4- 6-64	60	8.0	798	61	16	87	18	0	352	51	62	15	1.4	0.48	23	515		218
				3.04	1.32	3.78	0.46		5.77	1.06	1.75	0.24						
				35	15	44	5		65	12	20	3					508	
5- 8-64	61	7.1	869	65	18	85	13	0	228	33	132	15	1.1	0.27	25	563		236
				3.24	1.48	3.70	0.33		3.74	0.69	3.72	0.24						
				37	17	42	4		45	8	44	3					499	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				CHINO CREEK			86				
NEAR CHINO											
6-5-64 1100 Turbid; some foam	None 0.5 Est.	7.7	2400 620	9.5	0.6		230		7.4	78	DWR
7-14-64 1525 Turbid; many insects; much foam	None Ponded	8.0	230 620	6.0	0.7		110		14.2	191	DWR
8-5-64 1155 Turbid; sewage odor	None Ponded	8.2	620 230				--		12.8	162	DWR
9-4-64 1255 Very turbid, sewage odor	None Ponded	7.4	500 2300				100		12.3	158	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number				CHINO CREEK							86						
NEAR CHINO																	
	67	7.2	824	64	23	75	27	0	330	64	68	9.6	1.0	0.29	30	552	254
6- 5-64				3.19	1.89	3.26	0.69		5.41	1.33	1.92	0.15					
				35	21	36	8		61	15	22	2				524	
	84	7.9	894	63	21	104	16	0	355	68	87	1	2.0	0.61	33	601	244
7-14-64				3.14	1.73	4.52	0.41		5.82	1.42	2.45	0.02					
				32	18	46	4		60	15	25					570	
	83	7.2	1119	101	34	91	19	0	354	246	67	9	0.8	0.38	30	788	392
8- 5-64				5.04	2.80	3.96	0.49		5.80	5.12	1.89	0.15					
				41	23	32	4		45	40	15	1				772	
	80	7.4	1311	133	52	93	18	0	421	316	67	4	0.6	0.16	33	940	546
9- 4-64				6.64	4.28	4.04	0.46		6.90	6.58	1.89	0.06					
				43	28	26	3		45	43	12					924	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				LAKE ELSINORE			89				
AT STATE PARK											
11-12-63 1230	Dry Lake										DWR
1-6-64 1215	Dry Lake										DWR
2-19-64 1645	-- Lake	8.6	--				< 25		--	--	DWR
Lake 2-1/2 ft. deep; Colorado River water entering lake.											
3-9-64 1015	1228.46 Lake	8.0	6.2 23				100		9.2	117	DWR
Grayish-white cast to water; USGS gage at State Park											
5-15-64 1305	1232.40 Lake	8.0	6 < 0.45				< 25		10.4	120	DWR
Clear; swimmers in lake; mosquito larvae and tadpoles observed											
7-10-64 1330	None Lake	8.2	< 0.45 0.6				< 25		10.8	146	DWR
Slightly turbid; pieces of vegetation throughout water											
9-18-64 1135	None Lake	8.0	0.6 0.6				< 25		10.2	117	DWR
Clear											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT STATE PARK					LAKE ELSINORE						89						
11-12-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
1- 6-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
2-19-64	59	8.6	2915	83 4.14 14	23 1.89 6	538 23.39 78	16 0.41 1	19 0.63 2	203 3.33 11	535 11.14 36	545 15.37 50	7.5 0.12	0.9	0.78	8	1910 1876	302
3- 9-64	54	8.0	1802	87 4.34 23	26 2.14 11	278 12.09 64	10 0.26 1	0	181 2.97 16	397 8.27 44	270 7.61 40	3.1 0.05	0.5	0.40	6	1175 1167	324
5-15-64	74	8.2	1760	86 4.29 24	29 2.38 13	259 11.26 62	9 0.23 1	0	198 3.25 18	376 7.83 43	250 7.05 39	1.0 0.02	0.6	0.46	7	1170 1115	334
7-10-64	89	7.6	2299	88 4.39 18	32 2.63 11	388 16.87 70	14 0.36 1	0	259 4.25 18	465 9.68 40	363 10.24 42	1.0 0.02	1.0	0.84	8	1520 1488	351
9-18-64	73	8.3	3040	83 4.14 13	45 3.70 11	550 23.91 74	18 0.46 1	19 0.63 2	279 4.57 14	600 12.49 38	526 14.83 45	7 0.11	1.0	0.94	8	2020 1995	392

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Synders	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SANTA MARGARITA RIVER				51C			
NEAR FALLBROOK											
11-12-63 1500 Clear	2.19 5 est.	7.4	6.2 2.3				<25		8.0	79	DWR
1-6-64 1300 Very clear	2.40 8 est.	7.8	<0.45 2.3				<25		11.0	93	DWR
3-9-64 1145 Clear	2.28 4.4	7.6	2.3 2.3				<25		10.4	92	DWR
5-15-64 1100 Clear	2.27 2.0	7.6	23 50				<25		8.8	90	DWR
7-10-64 1200 Clear	2.17 0.6	7.5	6.2 1.3			0.4	<25		11.6	135	DWR
9-18-64 1005 Clear; arsenic = 0.0 ppm	1.15 Ponded	7.3	62 5				<25		9.6	96	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C / Evap 105°C / Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR FALLBROOK				SANTA MARGARITA RIVER 51C													
11-12-63	59	8.0	1242	93 4.64 35	32 2.63 20	135 5.87 44	4 0.10 1	0	420 6.88 52	99 2.06 15	155 4.37 33	0.5 0.01	0.8	0.20	33	740 759	364
1- 6-64	47	8.0	1139	92 4.59 36	29 2.38 19	127 5.52 44	4 0.10 1	0	356 5.83 47	125 2.60 21	142 4.00 32	0	0.6	0.18	38	725 733	349
3- 9-64	50	8.1	1134	91 4.54 36	32 2.63 21	122 5.30 42	3 0.08 1	0	342 5.61 45	137 2.85 23	146 4.12 33	0.5 0.01	0.5	0.16	22	715 722	359
5-15-64	62	7.5	1179	95 4.74 38	31 2.55 20	121 5.26 42	3 0.08 1	0	349 5.72 46	128 2.66 21	147 4.15 33	0.5 0.01	0.5	0.22	31	760 729	365
7-10-64	74	7.9	1220	97 4.84 37	32 2.63 20	130 5.65 43	3 0.08 1	0	409 6.70 50	110 2.29 17	155 4.37 33	1.0 0.02	0.6	0.24	32	772 762	374
9-18-64	67	7.6	1367	109 5.44 36	34 2.80 19	151 6.57 44	4 0.10 1	0	443 7.26 49	125 2.60 18	176 4.96 33	2 0.03	0.6	0.27	32	857 852	412

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Synders	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				ESCONDIDO CREEK 63							
NEAR HARMONY GROVE											
11-12-63 1615 Clear	1.92 4 est.	7.2	7,000 7,000	38	4.7	12	< 25		2.6	28	DWR
1-6-64 1525 Turbid; foam; sewage odor	1.98 4 est.	7.4	130 --	28	6.0	25	175		5.0	46	DWR
3-9-64 1315 Turbid; some foam; mosquito larva in water	2.19 5 est.	7.2	62 13	31	6.4	30	50		6.6	63	DWR
5-14-64 1420 Turbid; sewage odor; foam	2.42 3 est.	7.4	130 230	28.5	3.6	10.0	< 25		4.0	45	DWR
7-10-64 0845 Very turbid; some foam; fish observed	2.51 4 est.	7.2	2,400 230	3	2.2	14			9.4	114	DWR
9-17-64 1530 Clear; much foam; arsenic = 0.0 ppm	2.88 2.5 est.	7.1	2,400 130	3.7	3.7	29	130		8.7	98	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value: Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Mineral constituents in parts per million: Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR HARMONY GROVE				ESCONDIDO CREEK							63						
11-12-63	66	7.1	1984	78 3.89 21	43 3.54 19	255 11.09 59	17 0.43 2	0	198 3.25 17	276 5.75 30	343 9.67 50	37 0.60 3	1.8	0.84	22	1195 1171	372
1- 6-64	53	7.5	1773	75 3.74 21	40 3.29 19	234 10.17 58	18 0.46 3	0	289 4.74 25	288 6.00 32	260 7.33 39	37 0.60 3	1.4	0.84	25	1075 1121	352
3- 9-64	56	7.4	1698	76 3.79 23	41 3.37 20	205 8.91 54	16 0.41 2	0	310 5.08 28	296 6.16 34	233 6.57 37	6.2 0.10 1	0.4	0.76	18	1040 1045	358
5-14-64	70	7.1	2083	86 4.29 21	45 3.70 18	273 11.87 59	17 0.43 2	0	287 4.70 22	289 6.02 28	369 10.41 49	0.9 0.01	1.8	0.08	25	1283 1248	400
7-10-64	79	7.0	2184	91 4.54 22	42 3.45 17	279 12.13 59	17 0.43 2	0	217 3.56 17	306 6.37 30	398 11.22 53	2.0 0.03	1.0	0.76	22	1370 1265	400
9-17-64	71	7.1	2053	84 4.19 22	45 3.70 19	254 11.04 57	20 0.51 3	0	276 4.52 22	305 6.35 31	342 9.64 46	17 0.27 1	1.1	0.92	22	1234 1227	395

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN DIEGO RIVER 65							
AT OLD MISSION DAM											
11-13-63	None	7.4	230	0.78	1.1		40		6.6	69	DWR
1215	2 est.		130								
Slightly turbid; some foam; algae											
1-7-64	None	7.4	130	3.6	1.72		50		4.4	41	DWR
1430	2 est.		60								
Slightly turbid; some foam; insects											
3-10-64	1.49	7.8	240	5.1	1.46		< 25		8.8	84	DWR
1120	8 est.		240								
Clear; much green algae throughout stream; fish and insects observed											
5-13-64	None	7.4	230	3.9	1.1		37		9.6	109	DWR
1425	2 est.		2,400								
Slightly turbid; some foam											
7-9-64	None	7.2	62			16	100		7.6	93	DWR
1050	0.05 est.		23								
Slightly turbid; green algae throughout stream											
9-15-64	None	7.6	23	0.42	1.00		76		9.6	115	DWR
1335	0.15 est.		620								
Clear; little foam; much green algae on bottom; Arsenic = 0.0 ppm											

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million / equivalents per million / percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT OLD MISSION DAM						SAN DIEGO RIVER					65						
11-13-63	64	7.8	2874	119 5.94 20	69 5.67 19	415 18.04 60	11 0.28 1	0	437 7.16 24	288 6.00 20	578 16.30 55	5.0 0.08	0.9	0.66	21	1745 1722	581
1- 7-64	54	7.3	2381	110 5.49 21	67 5.51 21	335 14.57 56	12 0.31 1	0	354 5.80 23	341 7.10 28	436 12.30 48	15 0.24 1	0.7	0.78	19	1550 1510	550
3-10-64	58	7.4	1988	101 5.04 23	54 4.44 21	270 11.74 55	10 0.26 1	0	303 4.97 23	304 6.33 30	350 9.87 46	17 0.27 1	0.4	0.46	11	1295 1267	474
5-13-64	72	7.2	2047	96 4.79 22	58 4.77 22	274 11.91 55	9 0.23 1	0	319 5.23 24	296 6.16 29	355 10.01 47	2.0 0.03	0	0.65	18	1340 1265	478
7- 9-64	79	7.2	2536	113 5.64 21	69 5.67 21	348 15.13 57	7 0.18 1	0	520 8.52 31	242 5.04 18	490 13.82 50	0.2	0.8	0.78	37	1648 1563	566
9-15-64	78	7.3	2648	126 6.29 22	71 5.84 21	368 16.00 56	8 0.20 1	0	458 7.51 26	301 6.27 22	512 14.44 51	18 0.29 1	0.8	0.78	30	1690 1661	607

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow(cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Synders	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SPRING VALLEY CREEK			65B				
NEAR LA PRESSA											
11-13-63 0930 Clear; small fish observed	None 0.5 est.	8.0	620 60	0.68	0.90		<25		16.6	171	DWR
1-7-64 0945 Slightly turbid; small fish; thin scum on surface	None 0.25 est.	8.0	45 60				30		0	0	DWR
3-10-64 0930 Clear; horses in stream	None 0.10 est.	7.6	620 230				<25		14.6	139	DWR
5-14-64 0900 Clear; green algae on bed; insects	None 0.25 est.	7.6	2,400 130				<25		12.4	133	DWR
7-9-64 1005 Clear; much green algae	None 0.25 est.	7.6	23 23				30		12.0	152	DWR
9-15-64 1525 Clear; many small fish; some foam; Arsenic = 0.0 ppm	None 0.25 est.	7.3	4.6 230	0.3	0.7		<25		8.6	102	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
NEAR LA PRESSA					SPRING VALLEY CREEK						65B						
11-13-63	63	--	11161	543 27.10 23	287 23.60 20	1575 68.48 57	5 0.13	0	427 7.00 6	732 15.24 13	3440 97.01 81	0.0	0.9	0.88	15	7900 6809	2537
1- 7-64	58	7.9	10989	533 26.60 21	322 26.48 21	1650 71.74 57	5 0.13	0	395 6.47 5	792 16.49 13	3575 100.82 81	20 0.32	0.8	0.98	12	8060 7105	2656
3-10-64	56	7.8	8130	409 20.41 21	249 20.48 21	1300 56.52 58	4 0.10	0	386 6.33 6	674 14.03 14	2780 78.40 79	10 0.16	0.5	0.76	10	6000 5627	2046
5-14-64	66	7.9	10383	502 25.05 21	286 23.52 20	1573 68.39 58	5 0.13	0	267 4.38 4	764 15.91 14	3405 96.02 83	3.7 0.06	0.8	1.00	12	8300 6684	2430
7- 9-64	82	7.2	11990	553 27.59 21	324 26.65 20	1840 80.00 60	6 0.15	0	216 3.54 3	890 18.53 14	3936 111.00 83	14 0.23	0.6	1.20	3	9707 7674	2714
9-15-64	77	7.3	13099	613 30.59 22	331 27.22 19	1900 82.61 59	7 0.18	0	160 2.62 2	915 19.05 13	4230 119.29 84	20 0.32	1.6	1.25	8	9355 8105	2893

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				SAN DIEGO RIVER				65C			
NEAR MISSION GORGE ROAD											
11-13-63 1245 Clear; much foam; much algae	1.28 4 est.	7.8	1,300 620	7.4	2.5		<25		12.2	125	DWR
1-7-64 1515 Clear; much foam; brown algae; insects	1.32 5 est.	8.0	23 6	3.7	1.56		<25		4.4	40	DWR
3-10-64 1120 Clear; much green algae throughout stream; fish and insects observed	1.49 8 est.	7.8	240 240	5.1	1.46		<25		8.8	84	DWR
5-13-64 1455 Clear; much green algae; some foam	1.30 1.5 est.	8.0	23 23				<25		14.8	166	DWR
7-9-64 1125 Slightly turbid; low flow; foam; small fish observed	1.01 0.05 est.	7.4	0.60 0.60	5.4	0.7		45		22.2	268	DWR
9-15-64 1310 Yellowish color; Arsenic = 0.0 ppm	0.72 Ponded	7.3	240 13				70		9.0	74	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number NEAR MISSION GORGE ROAD				SAN DIEGO RIVER 65C													
11-13-63	63	7.8	2959	144 7.19 23	80 6.58 21	395 17.17 55	12 0.31 1	0	386 6.33 20	358 7.45 24	598 16.86 55	15 0.24 1	0.9	0.66	34	1905 1827	689
1- 7-64	53	8.2	2421	116 5.79 22	68 5.59 21	335 14.57 56	11 0.28 1	0	346 5.67 22	349 7.27 28	450 12.69 49	11 0.18 1	0.7	0.78	12	1580 1524	569
3-10-64	56	7.7	2037	98 4.89 22	59 4.85 22	275 11.96 55	9 0.23 1	0	312 5.11 23	296 6.16 28	368 10.38 48	10 0.16 1	0.5	0.64	6	1310 1276	487
5-13-64	71	7.6	2028	98 4.89 23	58 4.77 22	264 11.48 54	9 0.23 1	0	306 5.02 24	299 6.23 29	356 10.04 47	3.0 0.05	0.7	0.69	21	1320 1260	483
7- 9-64	78	7.3	3229	169 8.43 24	131 10.77 31	364 15.83 45	6 0.15	0	444 7.28 20	391 8.14 23	708 19.97 56	24 0.39 1	1.0	0.78	30	2327 2043	961
9-15-64	68	7.2	3113	172 8.58 25	110 9.05 27	371 16.13 48	5 0.13	0	476 7.80 23	366 7.62 23	633 17.85 53	19 0.31 1	1.0	0.78	53	2128 1,65	882

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES
SAN DIEGO DRAINAGE PROVINCE (Z)

Date Time Remarks	Gage ht.(ft) Flow (cfs)	Field pH	Coliform[a] MPN/ml	Constituents, in parts per million					Dissolved oxygen		Analyzed by[b]
				PO_4	Syndets	NH_4	Turbidity	Phenol	Parts per million	Percent saturation	
Stream name and station number				TIA JUANA RIVER			66				
AT INTERNATIONAL BOUNDARY											
11-13-63 0830	Dry -- no flow										DWR
1-7-64 0815	Dry -- no flow										DWR
3-10-64 0805	Dry -- no flow										DWR
5-14-64 1100	None 0.1 est.	7.8	70,000 + 7,000 +	7.3	13.4	18	700		1.4	17	DWR
Turbid; small organisms and trash in stream; sewage odor											
7-9-64 0915	Dry -- no flow										DWR
9-16-64 1015	Dry -- no flow										DWR

a. Tests made by agency reporting analysis. Tests on samples collected in pairs by Department of Water Resources were made by California Department of Public Health, Division of Laboratories, Los Angeles, California.

b. Analysds made by Department of Water Resources (DWR); Los Angeles Department of Water and Power (LADWP); Los Angeles County Health Department (LACHD); Long Beach City Department of Public Health (Long...

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

DATE SAMPLED	Temp when sampled in °F	pH	Specific conductance (micromhos at 25°C)	Mineral constituents in parts per million equivalents per million percent reactance value									Mineral constituents in parts per million				
				Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO_3	Bicarbonate HCO_3	Sulfate SO_4	Chloride Cl	Nitrate NO_3	Fluoride F	Boron B	Silica SiO_2	TDS Evap 180°C Evap 105°C Computed	Total hardness as $CaCO_3$
Stream name and station number																	
AT INTERNATIONAL BOUNDARY						TIA JUANA RIVER					66						
11-13-63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
1- 7-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
3-10-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5-14-64	77	7.4	3546	116 5.79 15	55 4.52 12	600 26.09 70	38 0.97 3	0	1004 16.46 42	56 1.17 3	760 21.43 55	3.1 0.05	0.8	2.10	18	2310 2143	516
7- 9-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
9-16-64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

DRY STATIONS: The stations below were dry on the dates and times shown

Central Coastal Drainage Province (T)		San Diego Drainage Province (Z)			
Cuyama River, near Garey (Sta. No. 44A)		San Luis Rey River, near Pala (Sta. No. 62)		San Dieguito River, below San Pasqual Valley (Sta. No. 64)	
Date	Time (PST)	Date	Time (PST)	Date	Time (PST)
10- 1-63	1330	11-12-63	1530	11-12-63	1700
11-14-63	1310	1- 6-64	1415	1- 6-64	1605
12- 2-63	1150	3- 9-64	1245	3- 9-64	1520
1- 3-64	0730	5-15-64	1025	5-14-64	1350
2- 4-64	0730	7-10-64	1145	7- 9-64	1650
3- 3-64	0845	9-18-64	0835	9-16-64	1350
4- 2-64	0845				
5- 4-64	1355				
6- 2-64	0815				
7- 2-64	1115				
8- 3-64	1515				
9- 1-64	1005				

TABLE D-3
RADIOASSAYS OF SURFACE WATER

TABLE D-3

RADIOASSAYS OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Station	Sta No	Date	Picocuries per Liter[a]			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Cuyama River near Garey	44a	5- 4	Dry			
		9- 1	Dry			
Santa Ynez River at Cachuma Reservoir	44b	5- 4	- 0.36 ± 2.85	- 0.28 ± 0.44	8.46 ± 12.52	- 0.16 ± 8.18
		9- 1	- 0.73 ± 1.61	1.97 ± 1.35	- 13.00 ± 12.43	- 5.75 ± 8.61
Santa Ynez River near Solvang	45a	5- 4	- 0.72 ± 4.41	0.51 ± 0.89	- 2.79 ± 13.19	- 1.08 ± 8.21
		9- 1	Dry			

a. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

Station	Sta No	Date	Picocuries per Liter[a]			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Matilija Creek above Matilija Dam	45b	5- 5	- 3.78 ± 5.96	- 0.50 ± 0.62	- 10.28 ± 12.83	-10.84 ± 8.24
		9- 1	- 2.21 ± 1.94	0.39 ± 0.80	- 5.29 ± 11.59	- 4.86 ± 8.46
Santa Clara River at Los Angeles-Ventura County Line	46	5- 5	- 5.67 ± 11.12	0.78 ± 1.26	- 34.37 ± 83.76	- 3.24 ± 9.07
		9- 2	- 10.01 ± 10.65	0.11 ± 1.00	20.16 ± 32.83	2.65 ± 8.89
Santa Clara River near Santa Paula	46a	5- 5	0.63 ± 1.45	- 0.50 ± 0.62	- 7.02 ± 12.13	- 5.31 ± 8.51
		9- 2	54.00 ± 63.94	-12.99 ± 8.45	3.76 ± 18.19	0.30 ± 1.07
Piru Creek near Piru	46c	5- 5	- 7.63 ± 3.74	0.62 ± 1.06	- 14.63 ± 13.61	- 4.50 ± 8.73
		9- 2	0.21 ± 11.29	- 1.45 ± 8.63	25.96 ± 16.75	- 0.35 ± 3.94
Sespe Creek near Fillmore	46d	5- 5	0.65 ± 6.70	- 0.40 ± 0.20	8.40 ± 14.90	1.89 ± 8.54
		9- 2	3.94 ± 6.36	0.35 ± 0.90	- 20.76 ± 13.95	- 3.20 ± 7.60
Santa Paula Creek near Santa Paula	46e	5- 5	0.91 ± 1.50	- 0.48 ± 0.28	14.18 ± 12.21	0.46 ± 8.21
		9- 2	2.75 ± 6.37	0.79 ± 0.97	- 12.88 ± 14.12	1.12 ± 8.74
Los Angeles River at Figueroa Street	47	5- 6	- 26.69 ± 11.70	- 0.39 ± 0.20	- 37.22 ± 15.98	28.93 ± 9.56
		9-14	0.00 ± 20.45	- 0.30 ± 2.84	- 5.94 ± 13.16	- 8.90 ± 7.42
Los Angeles River at Pacific Coast Highway	48	5- 6	141.38 ± 209.58	5.11 ± 2.89	-128.00 ± 36.96	- 5.67 ± 8.87
		9-14	- 22.22 ± 7.85	1.56 ± 1.31	9.78 ± 66.94	10.09 ± 9.31
Rio Hondo at Whittier Narrows	49	5- 6	6.07 ± 7.99	0.77 ± 1.41	34.62 ± 15.19	- 4.81 ± 9.01
		9-14	Dry			
Mission Creek at Whittier Narrows	49a	5- 6	Dry			
		9-14	Dry			

a. Deviations reported at the 95 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)

TABLE D-3

RADIOASSAYS OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)
(continued)

Station	Sta. No.	Date	Picocuries per Liter[a] Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Rio Hondo above Spreading Grounds	49b	5- 6	- 2.40 ± 1.11	0.29 ± 1.11	20.70 ± 14.38	5.75 ± 8.32
		9-14	- 3.68 ± 1.47	- 0.39 ± 0.85	12.60 ± 14.54	- 2.55 ± 8.88
San Gabriel River at Whittier Narrows	50	5- 6	- 5.82 ± 2.33	- 0.10 ± 0.85	3.80 ± 11.59	14.99 ± 10.20
		9-14	Dry			
San Gabriel River at Azusa Powerhouse	50d	5- 6	- 1.55 ± 3.29	0.44 ± 1.15	- 39.52 ± 12.76	2.26 ± 8.16
		9-14	- 0.36 ± 4.53	0.63 ± 0.96	25.64 ± 11.47	6.12 ± 8.76
Ventura River near Ventura	61	5- 5	1.20 ± 4.94	0.43 ± 0.89	4.01 ± 13.09	17.59 ± 9.84
		9- 1	0.57 ± 5.41	0.46 ± 1.07	0.53 ± 14.28	96.76 ± 11.49
Colorado River Aqueduct near La Verne	69		See Page 168 for Radiological Assay			
Los Angeles Aqueduct near San Fernando, Upper Van Norman Inlet	70		See Page 169 for Radiological Assay			

a. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

(continued)

Source and Sampling Point	Date Sampled[b]	Date of Analysis	Picocuries per liter[a]	
			Gross Alpha	Gross Beta
Colorado River Aqueduct at Weymouth Softening and Filtration Plant, La Verne, Station 69	October 1963	11-22-63	5.1 ± 0.7	10.3 ± 2.6
	November 1963	12-19-63	3.0 ± 0.7	10.2 ± 2.6
	December 1963	1- 6-64	3.7 ± 0.7	13.7 ± 2.6
Analyses received from The Metropolitan Water District of Southern California	January 1964	2-12-64	2.4 ± 0.7	15.3 ± 2.6
	February 1964	3-12-64	3.1 ± 0.7	24.7 ± 2.6
	March 1964	4- 7-64	1.9 ± 0.7	13.0 ± 2.6
	April 1964	5-28-64	1.6 ± 0.7	1.1 ± 2.6
	May 1964	7-14-64	3.4 ± 0.7	7.8 ± 2.6
	June 1964	7-17-64	3.6 ± 0.7	35.0 ± 2.6
	July 1964	8-13-64	5.0 ± 0.7	15.3 ± 2.6
	August 1964	9- 4-64	5.3 ± 0.7	15.4 ± 2.6
	September 1964	10-11-64	5.4 ± 0.7	15.2 ± 2.6

a. Deviations reported at the 90 percent confidence level.
b. Monthly composite.

TABLE D-3
RADIOASSAYS OF SURFACE WATER

TABLE D-3

RADIOASSAYS OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)
(continued)

Source and Sampling Point	Date Sampled	Beta-Gamma Activity[a]	Date Sampled	Beta-Gamma Activity	Date Sampled	Beta-Gamma Activity
Upper Van Norman Inlet	10- 7-63	9.5 ± 4.1	2-19-64	6.2 ± 4.4	6-10-64	6.0 ± 3.8
Los Angeles Aqueduct near San Fernando, Station 70	10-14-63	15.7 ± 4.1	2-26-64	9.1 ± 4.7	6-17-64	9.5 ± 3.9
	10-21-63	10.6 ± 3.3	3- 4-64	13.0 ± 4.7	6-24-64	7.8 ± 3.8
	10-30-63	10.6 ± 4.2	3-11-64	14.3 ± 4.5	7- 1-64	7.8 ± 3.8
Analyses received from the Los Angeles Department of Water and Power	11- 6-63	14.4 ± 4.3	3-18-64	14.1 ± 4.6	7- 8-64	5.5 ± 3.8
	11-13-63	12.1 ± 4.2	3-25-64	13.7 ± 4.6	7-15-64	7.6 ± 3.8
	11-27-63	13.0 ± 4.9	4- 1-64	13.5 ± 4.6	7-22-64	9.4 ± 3.9
	12- 4-63	11.3 ± 4.9	4- 8-64	10.3 ± 4.5	7-29-64	9.8 ± 4.0
	12-11-63	9.2 ± 4.8	4-15-64	13.8 ± 4.6	8- 5-64	9.0 ± 3.9
	12-18-63	13.1 ± 4.6	4-22-64	7.1 ± 4.4	8-12-64	10.0 ± 3.9
	12-23-63	14.3 ± 4.6	4-29-64	12.2 ± 4.6	8-25-64	8.8 ± 4.0
	1- 2-64	14.1 ± 4.6	5- 6-64	9.6 ± 4.5	9- 2-64	9.2 ± 3.9
	1-22-64	8.9 ± 4.7	5-13-64	12.4 ± 4.5	9-10-64	8.5 ± 4.0
	1-29-64	9.2 ± 4.7	5-20-64	11.8 ± 4.5	9-16-64	18.6 ± 3.7
	2- 5-64	9.8 ± 4.7	5-27-64	10.0 ± 4.5	9-23-64	14.5 ± 3.4
	2-12-64	13.7 ± 4.8	6- 3-64	5.1 ± 4.3	9-30-64	23.9 ± 4.3

a. Picocuries per liter. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

LAHONTAN DRAINAGE PROVINCE (W)

Station	Sta. No	Date	Picocuries per Liter[a]			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Mojave River near Victorville	67	5- 7	0.39 ± 1.58	0.21 ± 1.06	9.73 ± 12.28	- 2.00 ± 10.12
		9- 3	0.76 ± 1.66	- 0.07 ± 2.31	18.14 ± 11.40	- 3.30 ± 8.26
Mojave River at the Forks	67a	5- 7	3.95 ± 4.20	- 1.68 ± 0.75	- 5.57 ± 13.05	- 7.75 ± 11.24
		9- 3	2.88 ± 2.48	0.26 ± 0.73	7.29 ± 12.53	0.64 ± 8.54

a. Deviations reported at the 95 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER

a. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Station	Sta No	Date	Picocuries per Liter[a]			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Colorado River near Topock, Arizona	54	5-18	- 1.35 ± 2.60	0.88 ± 0.42	9.77 ± 13.43	- 7.01 ± 11.12
		9-11	2.68 ± 3.91	- 0.18 ± 2.31	13.75 ± 11.61	0.32 ± 8.43
Colorado River below Parker Dam	55	5-19	8.77 ± 10.32	0.10 ± 1.06	11.71 ± 15.90	2.54 ± 8.40
		9- 9	2.17 ± 3.74	0.49 ± 0.73	4.81 ± 13.16	- 5.53 ± 8.50
Colorado River at Yuma, Arizona	56	5-12	- 1.31 ± 3.82	- 0.50 ± 0.22	20.94 ± 14.25	4.16 ± 8.13
		9- 8	- 2.09 ± 1.45	- 0.37 ± 2.84	- 2.00 ± 11.39	1.72 ± 7.94
All American Canal at Pilot Knob	56a	5-13	- 0.91 ± 1.24	1.14 ± 1.51	3.98 ± 12.53	- 9.27 ± 9.04
		9- 8	2.04 ± 4.47	0.37 ± 0.73	2.52 ± 11.48	3.56 ± 8.40
Colorado River below Morelos Dam	56b	5-12	- 0.65 ± 2.41	- 0.21 ± 0.76	9.04 ± 12.98	5.77 ± 8.97
		9- 8	- 0.79 ± 12.09	0.07 ± 0.73	0.20 ± 12.05	6.27 ± 8.93
Colorado River near Blythe	56c	5-19	10.03 ± 7.93	0.32 ± 0.80	- 5.31 ± 14.52	- 1.69 ± 9.00
		9- 9	0.79 ± 3.11	1.00 ± 1.03	15.08 ± 11.21	- 1.86 ± 7.55
Colorado River, Lake Havasu at Aqueduct Intake	56d		See Page 173 for Radiological Assay			
New River at International Boundary	57	5-11	- 8.01 ± 3.20	0.55 ± 1.44	7.77 ± 28.40	- 6.77 ± 10.80
		9- 8	0.00 ± 1.25	0.59 ± 0.81	56.10 ± 37.41	6.35 ± 8.73
New River near Westmorland	58	5-11	- 5.55 ± 2.64	1.30 ± 1.61	-44.51 ± 30.33	3.17 ± 8.49
		9- 7	68.75 ± 47.53	0.00 ± 0.63	168.33 ± 238.95	2.64 ± 8.56
Alamo River at International Boundary	59	5-11	2.16 ± 7.01	- 0.09 ± 0.75	3.36 ± 13.10	- 1.38 ± 9.21
		9- 8	0.82 ± 1.03	3.41 ± 5.35	7.10 ± 7.95	- 9.81 ± 9.39

TABLE D-3

RADIOASSAYS OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)
(continued)

Station	Sta No	Date	Picocuries per Liter[a]			
			Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Alamo River near Calipatria	60	5-11	- 1.70 ± 3.17	0.85 ± 2.57	- 1.28 ± 22.56	3.48 ± 12.42
		9- 7	- 3.50 ± 31.05	- 0.11 ± 2.31	7.02 ± 31.34	2.64 ± 7.75
Whitewater River near Whitewater	68	5-10	0.19 ± 1.49	- 0.10 ± 0.80	0.91 ± 11.07	3.84 ± 8.07
		9-17	5.61 ± 3.41	- 0.39 ± 0.61	- 3.50 ± 12.22	3.89 ± 7.98
Salton Sea at Salton Sea State Park	68a	5-10	-83.42 ± 258.51	0.66 ± 0.97	119.79 ± 417.06	6.73 ± 9.14
		9- 7	0.00 ± 91.50	- 0.48 ± 1.63	111.90 ± 336.51	10.59 ± 9.04
Whitewater River near Mecca	68b	5-10	5.30 ± 7.25	1.60 ± 2.75	8.11 ± 15.47	20.22 ± 12.18
		9- 7	4.48 ± 4.17	0.59 ± 1.04	13.24 ± 11.99	2.22 ± 8.82

a. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)
(continued)

Source and Sampling Point	Date Sampled	Date of Analysis	Picocuries per liter[a]	
			Gross Alpha	Gross Beta
Colorado River Lake Havasu at Aqueduct Intake, Station 56d	10-1-63	10-20-63	4.0 ± 0.7	17.4 ± 2.6
	11-5-63	11-25-63	2.6 ± 0.7	15.0 ± 2.6
	12-3-63	12-26-63	4.0 ± 0.7	19.4 ± 2.6
Analyses received from The Metropolitan Water District of Southern California	1-7-64	1-13-64	3.6 ± 0.7	8.1 ± 2.6
	3-3-64	3-14-64	3.2 ± 0.7	16.5 ± 2.6
	4-2-64	4-18-64	2.0 ± 0.7	23.7 ± 2.6
	5-5-64	5-30-64	1.6 ± 0.7	10.7 ± 2.6
	6-2-64	7-20-64	3.2 ± 0.7	23.1 ± 2.6
	7-7-64	7-24-64	2.8 ± 0.7	23.1 ± 2.6
	8-4-64	8-15-64	5.2 ± 0.7	24.5 ± 2.6
	9-1-64	9-20-64	3.3 ± 0.7	19.6 ± 2.6

a. Deviations reported at the 90 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

Station	Sta. No	Date	Picocuries per Liter[a] Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Warm Creek at Colton	50b	5- 7	- 2.67 ± 1.01	2.68 ± 2.17	6.45 ± 12.98	5.24 ± 10.39
		9- 3	- 0.26 ± 7.94	0.59 ± 0.89	18.44 ± 11.79	- 2.00 ± 8.26
Santa Ana River near Arlington	51	5- 8	0.70 ± 5.35	0.38 ± 2.32	14.40 ± 15.30	9.33 ± 10.99
		9- 4	9.11 ± 22.87	- 0.33 ± 2.18	22.37 ± 12.56	- 2.96 ± 7.58
Santa Ana River below Prado Dam	51a	5- 8	2.91 ± 4.59	1.14 ± 1.57	13.42 ± 13.02	3.00 ± 10.28
		9- 4	2.10 ± 4.18	0.38 ± 0.99	17.13 ± 12.60	2.49 ± 8.11
Santa Ana River near Mentone	51b	5- 7	6.46 ± 3.58	0.18 ± 1.11	15.30 ± 12.50	8.79 ± 8.64
		9- 3	11.15 ± 3.82	- 0.07 ± 2.82	6.13 ± 10.87	2.55 ± 8.79
Santa Ana River near Norco	51e	5- 8	0.94 ± 4.31	1.91 ± 1.52	2.22 ± 13.77	0.92 ± 9.61
		9- 4	6.00 ± 4.84	0.89 ± 0.96	23.98 ± 11.39	- 4.02 ± 8.86
Santa Ana River at Colton	51f	5- 7	- 2.61 ± 0.98	2.68 ± 2.41	32.10 ± 13.72	28.68 ± 11.37
		9- 3	4.93 ± 4.13	0.04 ± 0.52	16.77 ± 12.38	- 1.70 ± 8.32
San Timoteo Creek near Loma Linda	51g	5- 7	- 1.46 ± 1.55	3.20 ± 2.55	16.87 ± 13.04	10.45 ± 10.92
		9- 3	0.50 ± 2.45	0.52 ± 0.81	10.81 ± 10.55	11.60 ± 7.96
Chino Creek near Chino	86	5- 8	- 3.93 ± 1.54	0.64 ± 2.09	58.77 ± 14.54	7.91 ± 12.28
		9- 4	12.89 ± 8.71	1.69 ± 1.50	18.83 ± 13.52	3.12 ± 8.58
Lake Elsinore at North Shore	89	5-15	- 1.85 ± 4.26	0.18 ± 1.11	2.94 ± 13.00	10.64 ± 8.86
		9-18	5.79 ± 7.74	- 0.11 ± 3.27	6.36 ± 13.59	- 2.11 ± 8.65

a. Deviations reported at the 95 percent confidence level.

TABLE D-3

RADIOASSAYS OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

Station	Sta. No.	Date	Picocuries per Liter[a] Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Santa Margarita River near Fallbrook	51c	5-15	0.28 ± 0.93	- 0.05 ± 0.80	- 8.55 ± 8.70	13.52 ± 9.07
		9-18	2.86 ± 3.51	- 0.57 ± 0.48	- 0.79 ± 13.12	1.53 ± 7.93
San Luis Rey River near Pala	62	5-15	Dry			
		9-18	Dry			
Escondido Creek near Harmony Grove	63	5-14	4.53 ± 7.18	0.73 ± 1.35	9.65 ± 15.84	- 3.54 ± 9.17
		9-17	3.48 ± 9.53	0.59 ± 1.03	20.89 ± 14.70	2.54 ± 7.86
San Dieguito River near San Pasqual Valley	64	5-14	Dry			
		9-16	Dry			
San Diego River at Old Mission Dam	65	5-13	- 3.55 ± 1.36	2.43 ± 2.16	10.06 ± 15.25	- 4.47 ± 9.85
		9-15	- 4.53 ± 2.09	0.29 ± 0.80	0.31 ± 16.09	3.72 ± 8.91
Spring Valley Creek near La Pressa	65b	5-14	58.79 ± 107.92	- 0.03 ± 0.77	- 42.98 ± 76.62	0.48 ± 8.39
		9-15	4.88 ± 29.71	0.99 ± 1.04	- 47.97 ± 79.76	10.72 ± 8.99
San Diego River near Mission Gorge Road	65c	5-13	3.68 ± 5.82	0.02 ± 0.74	13.61 ± 15.52	1.32 ± 7.95
		9-15	4.09 ± 13.36	0.07 ± 0.71	12.91 ± 29.90	- 3.57 ± 8.47
Tia Juana River at International Boundary	66	5-14	0.91 ± 7.00	5.44 ± 5.17	80.89 ± 35.76	13.81 ± 47.88
		9-16	Dry			

a. Deviations reported at the 95 percent confidence level.

TABLE D-4
SPECTROGRAPHIC ANALYSES OF SURFACE WATER

WATER YEAR 1953-54

Station	Sta No.	Date 1954	Constituents in parts per billion															
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
CENTRAL COASTAL DRAINAGE PROVINCE (T)																		
Santa Ynez River near Solvang	45a	5- 4	1.4*	0.57**	0.29**	1.4**	1.4*	1.4**	1.4*	2.0	5.7**	0.29**	1.4**	9.4	1.7	1.4**	0.57**	2.2	5.7**
Santa Ynez River at Cachuma Reservoir	44b	9- 1	8.0	0.57**	0.29**	1.4**	1.4*	1.4**	47	5.7	5.7**	0.29**	1.4**	5.7	2.0	1.4*	0.57**	2.1	5.7**
LOS ANGELES DRAINAGE PROVINCE (U)																		
Santa Clara River at L.A.-Ventura County Line	46	5- 5	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4*	4.9	5.7**	0.29**	1.4**	4.3	1.8	1.4*	0.57**	0.29*	5.7**
		9- 7	11	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	7.7	5.7**	0.29**	1.4**	5.1	1.8	1.4**	0.57**	0.94	5.7**
Santa Clara River near Santa Paula	46a	5- 5	1.4*	0.57**	0.71	1.4**	1.8	1.4**	1.4*	7.4	5.7**	0.29**	1.4**	19	2.9	1.4*	0.52**	0.69	5.7**
		9-13	7.7	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	4.8	5.7**	0.29**	1.4**	15	2.0	1.4**	0.57**	1.8	5.7**
Los Angeles River at Figueroa Street	47	5- 6	1.4*	0.57**	0.29**	1.4**	1.4*	1.4**	1.4**	19	5.7**	0.29**	1.4**	6.9	6.0	1.4**	0.57**	2.7	5.7**
		9-14	10	0.57**	0.29**	1.4**	1.4**	1.4**	5.7	3.1	5.7**	2.7	1.4**	1.9	1.3	17	0.57**	1.5	5.7**
Los Angeles River at Pacific Coast Highway	48	5- 6	1.5*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	100**	5.7**	7.4	27	0.49	4.9	1.4**	0.57**	0.29**	5.7**
		9-14	17	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	57	5.7**	0.29**	237	3.7	31	5.7**	0.57**	6.9	5.7**
Rio Hondo at Whittier Narrows	49	5- 6	1.4*	0.57**	0.29**	4.3	1.4**	4.0	1.4**	2.3	5.7**	0.29**	1.4**	12	2.4	1.4**	0.57**	4.6	5.7*
		9-14	Dry - No Flow																
Rio Hondo above Spreading Grounds	49b	5- 6	1.4*	0.57**	0.29**	7.7	4.9	8.0	9.7	4.0	5.7**	0.29**	1.4	8.0	15	5.3	0.57**	5.1	5.7*
		9-14	6.3	0.57**	0.29**	1.4**	1.4**	1.4**	19	9.4	5.7**	0.29**	1.4**	11	8.0	1.4**	0.57**	13	5.7*
San Gabriel River at Whittier Narrows	50	5- 6	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	4.0	5.7**	0.29**	1.4**	14	1.4	1.4**	0.57**	5.1	5.7*
		9-14	Dry - No Flow																
Ventura River near Ventura	61	5- 5	1.4*	0.57**	0.29**	1.4**	3.4	1.4**	80	2.3	5.7**	0.29**	1.4**	4.0	2.2	1.4**	0.57**	0.51	5.7**
		9- 1	9.0	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	2.9	5.7**	0.29**	1.4**	5.1	1.3	1.4**	0.57**	0.86	40
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)																		
Colorado River at Yuma, Arizona	56	5-12	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	3.7	5.7**	0.29**	1.4**	5.1	0.80	1.4**	0.57**	3.1	5.7**
		9- 8	8.0	0.57**	0.29**	1.4**	1.4*	1.4**	1.4**	3.7	5.7**	0.29**	1.4**	5.1	0.80	1.4**	0.57**	3.7	5.7*

TABLE D-4
SPECTROGRAPHIC ANALYSES OF SURFACE WATER
WATER YEAR 1953-54
(Continued)

TABLE D-4

SPECTROGRAPHIC ANALYSES OF SURFACE WATER

WATER YEAR 1963-64
(continued)

Station	Sta No.	Date 1964	Constituents in parts per billion															
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
SANTA ANA DRAINAGE PROVINCE (Y)																		
Warm Creek at Colton	50b	5- 7	1.4*	0.57**	0.29**	1.4**	1.4**	4.3	1.4**	31	5.7**	0.29**	3.7	4.9	39	1.4**	0.57**	6.3	5.7**
		9- 3	11	0.57**	0.29**	1.4**	1.4**	1.4**	13	46	5.7**	0.29**	7.7	4.6	50	1.4**	0.57**	2.9	5.7**
Santa Ana River near Arlington	51	5- 8	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	21	5.7**	0.29**	1.4**	4.3	0.94	1.4**	0.57**	4.3	5.7**
		9- 4	6.9	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	5.4	5.7**	0.29**	1.4**	4.9	0.91	1.4**	0.57**	4.9	5.7**
Santa Ana River below Prado Dam	51a	5- 8	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	8.0	5.7**	0.29**	1.4**	4.9	0.3	1.4**	0.57**	9.7	5.7**
		9- 4	6.6	0.57**	0.29**	1.4**	1.4**	1.4**	8.3	2.9	5.7**	0.29**	1.4**	7.4	1.1	1.4**	0.57**	2.9	5.7**
Santa Ana River near Norco	51e	5- 8	1.4*	0.57**	0.29**	1.4**	1.4*	1.4**	6.6	3.4	5.7**	0.29**	1.4**	6.6	2.1	1.4**	0.57**	3.4	5.7**
		9- 4	7.4	0.57**	0.29**	1.4**	1.4**	1.4**	2.9	2.9	5.7**	0.29**	1.4**	4.6	1.5	1.4**	0.57**	4.3	5.7**
SAN DIEGO DRAINAGE PROVINCE (Z)																		
Escondido Creek near Harmony Grove	93	5-14	1.4*	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	19	5.7**	0.29**	10	3.7	34	1.4**	0.57**	3.1	5.7**
		9-17	11	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	343	5.7**	0.29**	154	6.6	21	1.4**	0.57**	1.4	5.7**
San Diego River near Mission Gorge Road	95c	5-13	6.3	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	22	5.7**	0.29**	1.4**	7.7	17	1.4**	0.57**	33	5.7**
		9-15	30	0.57**	0.29**	1.4**	1.4**	1.4**	1.4**	54	5.7**	0.29**	1,000***	8.0	2.5	1.4**	0.57**	4.7	5.7**

*Results are equal to but slightly less than the amount indicated.
**Results are less than the amount indicated.
***Results are more than the amount indicated.

Sta. No.

44a
44b
45a
45b
46
46a
46c
46d
46e
47
48
49
49a
49b
50
50b
50d
51
51a
51b
51c
51e
51f
51g
54
55

LEGEND

● 55b SURFACE WATER SAMPLING STATION

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
HYDROLOGIC DATA, 1964

LOCATION OF SURFACE WATER QUALITY MONITORING PROGRAM STATIONS, 1963-64

SCALE OF MILES
15 0 15 30 45
1965

STREAM SAMPLING STATIONS 1963-1964

Sta. No.		Sta. No.	
4-A	Cuyama River near Garey	56	Colorado River at Yuma, Arizona
4-B	Santa Ynez River at Cachuma Reservoir	56a	All American Canal near Pilot Knob
4-C	Santa Ynez River near Solvang	56b	Colorado River below Morelos Dam
4-D	Matilija Creek above Dam	56c	Colorado River near Blythe
4-E	Santa Clara River at Los Angeles-Ventura County Line	56d	Colorado River at Colorado River Aqueduct Intake
4-F	Santa Clara River near Santa Paula	57	New River at International Boundary
4-G	Piru Creek near Piru	58	New River near Westmorland
4-H	Sespe Creek near Fillmore	59	Alamo River at International Boundary
4-I	Santa Paula Creek near Santa Paula	60	Alamo River near Calipatria
4-J	Los Angeles River at Figueroa Street	61	Ventura River near Ventura
4-K	Los Angeles River at Pacific Coast Highway	62	San Luis Rey River near Pala
4-L	Rio Hondo at Whittier Narrows	63	Escondido Creek near Harmony Grove
4-M	Mission Creek at Whittier Narrows	64	San Dieguito River below
4-N	Rio Hondo above Spreading Grounds	65	San Pasqual Valley
5	San Gabriel River at Whittier Narrows	65b	San Diego River at Old Mission Dam
5-B	Warm Creek at Colton	65c	Spring Valley Creek near La Presa
5-D	San Gabriel River at Azusa Powerhouse	66	San Diego River near Mission Gorge Road
5-I	Santa Ana River near Arlington	67	Tia Juana River at International Boundary
5-M	Santa Ana River below Prado Dam	67a	Mojave River near Victorville
5-N	Santa Ana River near Mentone	67b	Mojave River at the Forks
5-O	Santa Margarita River near Fallbrook	68	Whitewater River near Whitewater
5-P	Santa Ana River near Norco	68a	Salton Sea at State Park
5-R	Santa Ana River at Colton	68b	Whitewater River near Mecca
5-S	San Timoteo Creek near Loma Linda	69	Colorado River Aqueduct at La Verne
54	Colorado River near Topock, Arizona	70	Los Angeles Aqueduct near San Fernando
55	Colorado River below Parker Dam	76	Chino Creek near Chino
		80	Lake Elsinore at State Park